THE ARCHAEOLOGY OF WAR

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The Archaeology of War

Studies on Weapons of Barbarian Europe in the Roman and Migration Period

BARTOSZ KONTNY

BREPOLS

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Introduction

This work is a revised and supplemented translation of the book *Archeologia Wojny: Ze studiów nad uzbrojeniem barbarzyńskiej Europy okresów wpływów rzymskich i wędrówek ludów*, issued in 2019 by the publishing house Napoleon V. It presents a compendium of knowledge about armaments in the Polish lands during the Roman Period and the Migration Period. Apart from issues related to the Przeworsk Culture, the presented volume includes a comprehensive discussion of the weapons of the Wielbark Culture (the first in thirty years), the West Balt Circle (so far not done in such a broad framework), and the problem of sacrificial war booty offerings and other watery deposits known from northern Europe but recognized also to the south of the Baltic Sea, i.e. in the lands of northern Poland (the territory of the Wielbark Culture, West Balt Circle, and Lubusz Group). The latter topic is presented against a broad background, taking into account issues that go far beyond the territory of central Europe and the borders of the protohistoric period. In addition, the book includes a chapter devoted to shields, primarily from the protohistoric period, but also taking into account the genesis, prehistory, and history of this protective weapon, as well as analogies from other cultures and civilizations. This topic is rarely taken up, and in my opinion it is worth developing due to the fact that the shield conveys important symbolic and practical content — indicating ways of fighting, but sometimes providing data for the reconstruction of the former military units!

The book is the result of many years of my research on the ancient military. In part, it uses the achievements of the other specialty that I practise — underwater archaeology. The combination of both research areas is indeed a lucky twist of fate for me, and I have the opportunity to pursue both passions, among others in the study of an ancient sacrificial site in Lake Lubanowo (north-west Poland) and medieval armaments from Lake Hammersø on Bornholm. The presented work does not take into account in detail the issues related to borderland cultural units: the Luboszyce Culture and the Lubusz Group. A doctoral thesis by Karol Demkowicz has recently been written on the first of these. Hoping for its imminent publication, I found it pointless and dishonest to summarize the findings contained therein before they appear in print. In turn, the concept of the Lubusz Group has been poorly defined, and since it corresponds to a small area, it does not have a similar importance to the problems of the Barbarian military as the Wielbark Culture, Przeworsk Culture, or West Balt Circle weapons. General observations concerning the aforementioned cultural borderland groups have been included in many places in this volume, e.g. in order to make a comparison with the Przeworsk Culture weaponry model, and also presented in several articles by Bartłomiej Rogalski.

The presented book is the first study of this kind in the literature on the subject, so I decided that it would be worth reaching a wider audience. Due to the interest in the issues of ancient armaments (see the activity of various historical re-enactment groups), I tried to present the narrative in an accessible way, as far away from scientific jargon as possible, while maintaining the fully scientific nature of the argument. For this reason, for example, the nuances of relative and absolute chronology are discussed only in the first chapter, omitting the whole complexity of the problem, which I am fully aware of and which I have often expressed in my publications. At the same time, I am conscious that it was impossible to avoid detailed considerations about individual monuments or their groups. This was especially the case when discussing original sources or subjecting them to reinterpretation, in other words where it was necessary to make a detailed analysis on the basis of 'hard archaeology'.

By submitting to the reader a work that presents the most up-to-date state of knowledge about armaments of the protohistoric period, I would like to thank for their help countless kind people (some of whom are mentioned by name in individual chapters), colleagues, especially Katarzyna Czarnecka and Marcin Biborski, for many years of discussions on protohistorical weapons and military matters, and Adam Cieśliński, Paweł Szymański, and Andrzej Maciałowicz for substantive comments on the text. I would like to thank the translators: Grzegorz Żabiński, who is also an excellent weapons expert, and Keith Mullins-MacIntyre. I would especially like to thank my wife, Agnieszka, for struggling together with the prose (and poetry) of life. I dedicate this book to her. And finally, the most important: 'Deo gratias!'.

CHAPTER 1

Sacrificial Lake Deposits as Sources for Learning about Military Affairs and War Rituals in Barbarian Europe during the Roman and Migration Periods

The Roman Period, which extends from about the turn of the eras to the symbolic date of AD 375,[1] and the subsequent Migration Period (which lasted to the second half of the seventh century) was a peculiar time for the Barbarians in central and northern Europe. In this period, the skills of iron and precious metals processing became widespread. These skills were initiated about two hundred years earlier thanks to Celtic influences from southern Poland. Moreover, grave furnishings became richer, and new categories of artefacts began to appear among grave goods, which were often manufactured under the influence of fashion from Roman provinces. What is more, grave furnishings began to contain greater quantities of Roman imports, which found their way there due to developed trade (in amber, among other things), diplomatic gifts, booty taken during military expeditions to Roman provinces, etc. Among such artefacts, there are vessels for the production and consumption of wine, toilet utensils, parts of garments and ornaments, but also high-quality weapons (especially swords). Thanks to the co-occurrence of a high number of grave goods which are often encountered with well-dated imports, it was possible to propose an extremely detailed (as far as it is possible in archaeology) chronology of this period. As a result, it is often possible to date individual features (e.g. burials) precisely to one generation (twenty–thirty years). Thanks to this, the image of the past becomes dynamic and archaeologists are able to track, for example, changes in fashion concerning garments, burial rites, and also weaponry. For this purpose researchers use the so-called relative chronology, assigning features to phases (in this case, these phases are marked with a combination of letters: A — Late Pre-Roman Period, B — Early Roman Period, C — Younger and Late Roman Period, D — Early Migration Period, E — Late Migration Period, and numbers).[2] This allows for studying phenomena in a correct sequence, even if it turns out that absolute dates which mark the borders of individual phases can be refined. The latter is inevitable anyway! Archaeological sources are not the only branch of knowledge that can be used by researchers of the discussed period. As we are dealing with a proto-historical period, it is necessary to stress the significance of ancient written

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[1] At this time it came to a Hun invasion on the Black Sea steppes. This disturbed the balance of powers in Barbarian Europe, which was anyway not very stable, and initiated the Migration Period. In the Early Migration Period, that is *c.* in the first half of the fifth century, strong population movements intensified. As a result, the territory of present-day Poland became depopulated, with the exception of the north-eastern part of the country that was inhabited by Balt communities. Apart from this, small settlement enclaves survived, where Germanic populations lived at least until the seventh century. It seems now that the largest settlement concentration of this kind existed in Cuiavia (see e.g. Kontny and Rudnicki 2020; Rudnicki and Rudnicki 2020).

[2] At present, the proposed correlation to the calendar dates for the territory of Poland (there may be minor differences in the case of neighbouring territories and individual cultural units) is the following: A1 — the first half of the second century BC and the beginning of the second half of the second century BC, A2 — from the first decades of the second half of the second century BC to about the mid-first century BC, A3 — to the turn of the eras/the end of the first decade AD, B1 — to about AD 75/80, B2a — the last quarter of the first century and the early second century, B2b — to about 160, B2/C1 — to about 200, C1a — to about 230, C1b — to about 260, C2 — to 300/10, C3 — to *c.* 375, D1 — to the early fifth century, D2 — to about 450, D3 — to about 475, E1 — to about 525, E2 — to about 600, E3 — to the third quarter of the seventh century. The chronology of individual phases is quoted according to Dąbrowska 1988, 62 and Godłowski 1985a; see also Szymański 2018, 98; further reading can be found in these works.

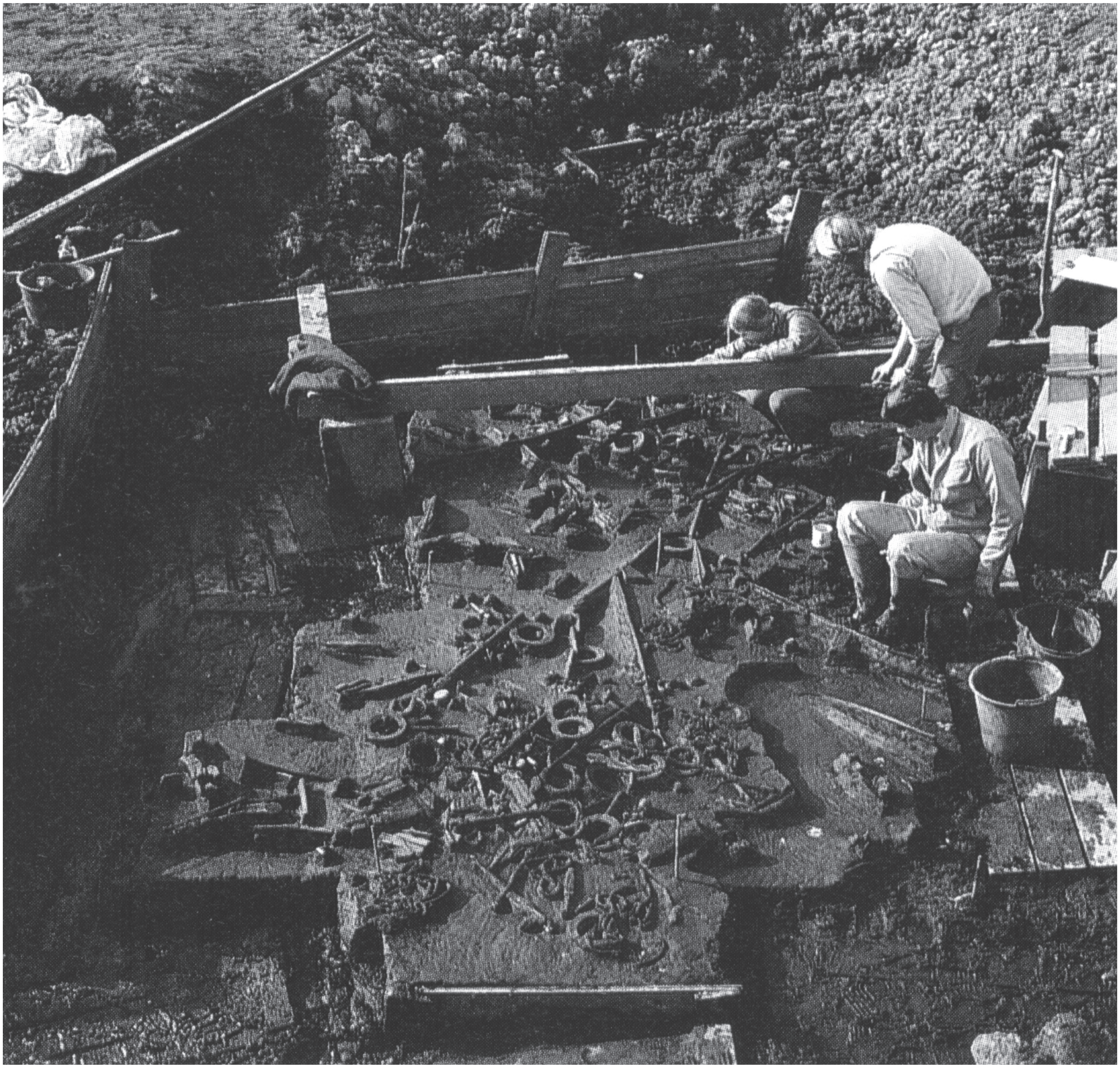

Figure 1.1. Excavations at the bog site of Illerup (after Ilkjær 2002a, 37).

sources, the *Germania* of Tacitus being of paramount importance. Some pieces of information on the life of the Barbarians are also provided by their depictions in Roman art, although — as is the case with narratives of ancient historians — these sources can hardly be considered impartial. The image of the Barbarians in such sources was distorted by *interpretatio romana*.

Barbarian military affairs of the Roman Period are, to a considerable degree, studied on the basis of weaponry kits which are found in necropoleis. In this case, a special role is played by research on the Przeworsk Culture (located in central and southern Poland), where weapons were often and abundantly deposited into graves.[3] However, we have one more source of knowledge, which is characteristic of Scandinavia.

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[3] e.g. Kontny 2002a; 2003a.

These are the so-called bog sites.[4] The name is not entirely precise, as artefacts which are discovered in present-day bogs had been mainly deposited in lakes, which later transformed into peat-bog sites mostly as a result of the eutrophication process. These sites are the remains of deposits (of varying sizes) containing ritually destroyed weapons (Fig. 1.1), and — to a lesser degree — of tools and garment parts.

Written sources provide a description of yet another significant ritual of war that was used by the Germanic peoples, that is, dance with weapons. Tacitus says that:

> Genus spectaculorum unum atque in omni coetu idem: nudi iuvenes, quibus id ludicrum est, inter gladios se atque infestas frameas saltu iaciunt. exercitatio artem paravit, ars decorem, non in quaestum tamen aut mercedem: quamvis audacis lasciviae pretium est voluptas spectantium.
>
> > (One and the same kind of spectacle is always exhibited at every gathering. Naked youths who practise the sport bound in the dance amid swords and lances [*frameae*, i.e. pole weapons — author's remark] that threaten their lives. Experience gives them skill, and skill again gives grace; profit or pay are out of the question; however reckless their pastime, its reward is the pleasure of the spectators.)[5]

Attention was paid to a sacral or initiation nature of this phenomenon. It was explained as a sort of military exercise, related to the cult of Odin and the 'berserker' battle frenzy. It must be admitted, however, that there is a huge temporal gap between Tacitus's narrative and late associations.[6]

Regarding bog sites, it is worth considering the roots of this habit. Offerings of various kinds of artefacts in bogs are testified to in Scandinavia since the Late Stone Age when chiefly flint axes were thrown into them. In the Bronze Age, it was the Nordic cultural zone where various artefacts were deposited into bogs. These were weapons (swords, axes, spearheads, shields, helmets with fancifully bent horns — the latter gave rise to an erroneous assumption concerning the use of horned helmets by the Vikings), as well as tools, musical instruments (famous bronze lurs — strongly bent wind instruments that were used in ceremonies), or even — as early as the Early Iron Age — women's braids.[7] However, in this period small deposits are dominant. Their vestiges are animal bones, clay vessels, stone or timber platforms, as well as timber idols. It is assumed that they were related to fertility cults, during which, among other things, ritual meals were consumed.[8] Studies on weaponry deposits that were offered in these periods in various parts of Europe have strongly advanced in recent times.[9] In research, the contexts in which weapons were found were distinguished — thus, we are dealing with watery finds (rivers, lakes, bogs, seas, wells) and land finds. What is also taken into consideration is the composition of weapon sets, the manner of their treatment (no damage, mechanical or fire destruction), as well as the chronological differentiation. Attempts are made at separating offerings (German: *Opfergaben*) from gifts (German: *Weihengaben*) presented to deities. The former were believed to be composed of intentionally damaged weapons — it was not possible to use them again — while the latter consisted of fully functional weapons. War trophies were believed to be a peculiar phenomenon. These were composed of captured weapons that were often destroyed right after the battle (deposits from Great Britain which are dated to the Late Bronze Age are also included in this group of the Iron Age chronology). An interesting group of finds are depictions of warriors, be it embossed on metal sheets or in the form of figurines. These were deposited in

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[4] The site of **Illerup** has been examined in the most comprehensive manner. Archaeological sources from this site have been published in a dozen or so volumes: Ilkjær 1990; 1993; 2001; von Carnap-Bornheim and Ilkjær 1996; Biborski and Ilkjær 2006; Pauli Jensen and Nørbach 2009; Bursche 2011; Kokowski 2019. See also a popular-scientific publication concerning Illerup: Ilkjær 2002a. Among significant modern works, it is also necessary to mention those concerning the sites of **Ejsbøl**: Ørsnes 1988; Nørgård Jørgensen and Andersen 2014; **Nydam**: Engelhardt 1865; Bemmann and Bemmann 1998; Rau 2010; 2013; Holst and Nielsen 2020; **Thorsberg**: Engelhardt 1863; Raddatz 1987; von Carnap-Bornheim 2014; Lau 2014; Blankenfeldt 2015; Matešić 2015; **Kragehul**: Engelhardt 1867; Iversen 2010; **Porskjær**: Nørgård Jørgensen 2008; **Vimose**: Engelhardt 1869; Pauli Jensen 2008; **Alken Enge**: Løvschal and others 2019. A good insight into the issue of bog sites is also offered by numerous papers published in the catalogue of the exhibition in the National Museum in Copenhagen: Jørgensen and others 2003. Mentioned here are only the publications discussing the most important and largest bog sites.

[5] Tacitus, *Germania*, XXIV. Translated by A. J. Church and W. J. Brodribb.

[6] For this issue see especially a significant work: Wolfram 1936; 1937; 1938. Concerning newer works that discuss this problem, it is possible to mention the following ones: Holmquist 1961; Nedoma 2004; Teichert 2014. The last author rejects the possibility of this phenomenon's continuation until the Middle Ages and believes that it cannot be related to depictions from the Migration Period and the Viking Period. As for berserkers see Samson 2020.

[7] For plaits deposited in bogs see Ebbesen 2008.

[8] Pauli Jensen 2009a.

[9] Remarks on Bronze Age and Early Iron Age deposits after Huth 2016; Della Casa and Ballmer 2016.

Palaeo-Venetic temples in northern Italy at the end of the Bronze Age and in the Iron Age.[10] Such depictions were probably images of donors or their alter egos and they were perhaps meant to make it possible to enter into a relationship with the deity.[11] An important role in considerations on the sacral significance of weaponry is played by the topography. For instance, the Alpine passes, where weapons were discovered, are considered liminal zones. This is why it is justified to treat local finds of weapons (usually not destroyed) analogously to gifts deposited into waters and rock rifts. It is interesting that some so-called hoards were sometimes composed of non-functional weapons (outsized artefacts) or simulacra, that is, artefacts that formally resembled weapons but were completely impractical (e.g. dirks of the Plougrescant-Ommerschans type,[12] with blunt edges and without the possibility of attaching hilts). These were symbols of wealth that can be compared to gold weapons in hoards and graves from the Early Bronze Age.[13] Attention is also paid to multiple depictions of weapons and ornaments on statuary menhirs (related to the cult of ancestors?) from as early as the Copper Age. This phenomenon is of paramount importance for explaining the nature of hoards from the Early Bronze Age. Although in archaeological practice it is often pretty problematic to unambiguously interpret deposits, it can be assumed that in the Early Bronze Age there was a preponderance of thanksgiving deposits. This was manifested in the size and number of deposited artefacts, while in the Late Bronze Age there was a predominance of gifts deposited in liminal places. The history of the symbolic use of artefacts that were part of 'hoards' may have been longer. Celtic finds from the La Tène Period are believed to be secondary deposits. Originally, weapons were exhibited in temples, as was the case in ancient Greece (this matter is discussed in detail below), or on posts, and later on, they were deposited in the ground. An example of furnishings of such a clan temple or perhaps a 'memorial chamber' is offered by an earlier discovery from the Middle Bronze Age that was made in Piller in north Tyrol.[14] There, weaponry and parts of female garments were found tightly packed in a ceramic vessel which was deposited in a rock fissure. These artefacts originate from a period spanning a bit more than two centuries. Some of these were property of elites (both women and men), but there were also axes and spearheads that could be related to the 'second-class' warriors. What is more, there were even agricultural tools (axes, sickles) and raw bronze ingots (German: *Gusskuchen*), as well as sickles with a pre-monetary function. These objects were destroyed in a one-time act in a professional manner, i.e. after heating, which removed the dendritic structure of the metal. Soon thereafter, the artefacts were deposited into the rock rift. Prior to deposition, the most precious artefacts were probably stored for many years in separate premises, where they were kept as insignia of female and male elites: memorabilia that were used in the cult of ancestors.

Apart from water and ground deposits, in the Bronze Age and the Early Iron Age weapons also occurred in sepulchral contexts, as well as in places where sacrifices were made with the use of fire (German: *Brandopferplätze*).[15] Destroyed (sometimes very comprehensively) weapons and armour of high value (e.g. helmets) which have been discovered at the latter sites may be the evidence of sacrifices made by representatives of elites in the Late Bronze Age and in the Iron Age. On the other hand, as regards grave finds, attention was usually paid to the role of weaponry as a marker of social position. However, a grave could also be considered some sort of 'window to the other world' which opened for a short time — just enough to provide the dead with a message they carried to the afterlife. Similar 'gateways' can be pointed out in the topography as, e.g., entrances to ravines, passes, rifts, waters, and marshes, as well as other liminal places. Such areas were believed to be natural points of contact with numinosum (deities, spirits, heroes, ancestors), which is why it was there that deposits allowing for sending a message were placed. Also in this case weapons were the most frequent message carriers. Possible answers could have been perhaps read solely by the chosen, who possessed proper knowledge of how to interpret signs.

On the other hand, the roots of Scandinavian rituals can be also traced in the Mediterranean world. Namely, weapons (sometimes destroyed)[16] were deposited in Greek temples (including the ones from Magna Graecia) from the second half of the eighth to the mid-fifth centuries BC; these were usually artefacts captured by the Greeks from other Greeks in wars waged between various poleis.[17] However, it was possible to point out a number of non-Greek weaponry examples. This, as long as a careful chronological and typological analysis was used, allowed for making an attempt at relating these weapons to specific historic events. In such deposits, there is a predominance of Italic and Scythian weapons from the eighth–seventh centuries BC, i.e. from the period of the foundation of the first Greek colonies in the western Mediterranean. Weapons were chiefly deposited in large sanctuaries of a supralocal nature. An analysis of damage on weaponry, taking into consideration the cultural background, allows for distinguishing between weapons which underwent intentional destruction and instances of deposition of bronze scrap (weapon fragments).[18] Weaponry was also deposited in temples dedicated to female deities, with special reference to Athena, Artemis, and Hera. This custom may have had Near Eastern roots and the presence of weaponry (including miniature weapons) can be explained by the high status of these goddesses in the Greek pantheon. Due to this, they could be perfect patrons and protectors of the polis.[19] It was perhaps the trophies (Greek: τρόπαιον, τρόπαια — *tropaion*, *tropaia*) that were prototypes for the aforementioned actions. *Tropaia* were monuments of victory which were erected on battlefields by the winners, especially where the fate of the encounter turned, such as the place where the battle order of one side broke. The success was commemorated by means of erecting a post and hanging the helmet and armour of the defeated enemy on it. In the course of time, this symbol became so legible that it was placed in temples and other public places, and in monumental form, cut in stone. This symbol was, obviously, also made use of by the Romans.[20]

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[10] Capuis and Chieco Bianchi 2010.

[11] Figurines depicting human figures ('bronzetti'), including warriors, were also offered in sanctuaries of the Nuragic Culture in Sardinia from the Late Bronze Age and Early Iron Age (between the twelfth and sixth centuries BC). They communicated religious information and expressed participation in a Mediterranean community by characteristic motifs and designs (Gonzales 2012).

[12] Fontijn 2001.

[13] Yet another meaning can be supposed in the case of huge axes known from the Nordic zone in the Bronze Age. They occur *c.* 1500 BC and their edges were only superficially covered with bronze, while their cores were made from … clay (Kristiansen and Larsson 2005, 194). It is obvious that such artefacts could not fulfil any combat function and they were rather of symbolic-ritual significance. Perhaps they were supposed to 'imitate' fully-fledged artefacts?

[14] Tomedi 2016.

[15] Della Casa and Ballmer 2016.

On the other hand, offerings of weapons were also in use in the Etruscan world. A good example is offered by a discovery made on the beach in the Etruscan town of Populonia (now Baratti, Livorno Province). What was found there was a complex of altars surrounded by sacrificial pits, centred around a *tropaion*. The latter is believed to have had the shape of a stone tumulus (barrow) on which there was a post with armour and a helmet attached to it. Furthermore, spears were stuck into the ground around the post (their remains consist of over two hundred spear-butts).[21] When the sanctuary was in use, that is, between the turn of the seventh and sixth centuries BC and the third century BC, types of cults were changing. For example, in the sixth century BC yet another type of ritual was practised there, which can be first of all explained by the fact that a non-Etruscan community was using the site, which implies that the custom was known even more broadly. This community was burying their dead in a nearby necropolis. As a whole, this site was considered one of the earliest examples of a *tropaion* located on a barrow, the type described in the *Aeneid*.[22] This pattern was to develop later into impressive monuments of victory that were erected in Roman times.[23]

Written sources confirm that the Romans were also burning captured weapons. It can be assumed that this habit was in use from the Middle and Late Republican Period to the beginning of the first century BC. Its Etruscan roots are not certain. Weapons were collected on the battlefield or in the enemy's camp and were then burnt, which initially seems to have been a ritual of victory. On the other hand, further symbolic aspects are also stressed, such as removing evil forces related to the enemy's weapons or their extreme desacralization which rendered their reuse impossible. Repeated use of defeated enemy's weapons could have brought a serious threat to the user due to such weapons' taboo. It is also impossible to exclude thinking in terms of sympathetic magic. According to the Romans, the destruction of weapons would lead to the destruction of the enemy. It must be underlined that the taboo related to the enemy's weapons was not absolute in its nature, as since about 300 BC captured weapons were often exhibited in public buildings and in private houses. What is more, some weaponry was made use of in the triumphs. In the Early Roman Imperial Period, this habit was not completely abandoned, but its nature changed: it depicted the won peace rather than the ritual of war.[24]

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[16] Specifically swords were 'killed' in that way, which is well documented also earlier, i.e. in the Early Iron Age Aegean from the mid-tenth century on — see Lloyd 2015.

[17] Baitinger 2011; Graells i Fabregat and Longo 2018. A habit of sacrificing full-scale, functional weapons but also cast model weapons (occasionally miniaturized), sheet-metal model weapons (commonly miniaturized), and figurines of warriors and boxers is known from much earlier times, i.e. Bronze Age Crete. They were placed in extra-urban shrines — in caves and peak sanctuaries (Molloy 2012, 113–18).

[18] Baitinger 2016.

[19] Warin 2016.

[20] Lund 2003, 166–71.

[21] What is meant here are lower fittings of shafted weapons. Their function was to secure a better balance of the weapon (a partial counterbalance of the spearhead's weight), rendering it possible to stick the weapon into the ground and providing an additional point for delivering thrusts, cf. Kontny 1999, 128.

[22] Vergil, *Aeneid*, XI. 4–11: 'vota deum primo victor solvebat Eoo. Ingentem quercum decisis undique ramis constituit tumulo fulgentiaque induit arma, Mezenti ducis exuvias, tibi, magne, tropaeum, bellipotens: aptat rorantis sanguine cristas telaque trunca viri et bis sex thoraca petitum perfossumque locis clipeumque ex aere sinistrae subligat atque ensem collo suspendit eburnum' (as victor, at first light, he discharged his vows to the gods. He planted a great oak trunk, its branches lopped all round, on a tumulus, and decked it out as a trophy to you, great god of war, in the gleaming armour stripped from the leader, Mezentius: he fastened the crests to it, dripping with blood, the warrior's broken spears, and the battered breastplate, pierced in twelve places: he tied the bronze shield to its left side, and hung the ivory-hilted sword from its neck). Translated by A. S. Kline in *Vergil: The Aeneid* <https://www.poetryintranslation.com/PITBR/Latin/VirgilAeneidXI.php> [accessed 2 July 2021].

[23] Camilli 2016.

The third cultural zone that may have influenced the use of weapons in the sacrum sphere in northern and central Europe is the Celtic world. In the La Tène Period (second half of the fifth century BC–turn of the eras) some ritual traditions of the Bronze Age were still in use: the Celts deposited weapons in sacrificial shafts, e.g. in Förk in Carinthia.[25] Weapons which were discovered there originate from at least two deposits from Phase LTB2 (first half of the third century BC), while only individual artefacts were dated to later parts of the La Tène Period. What was found there were Celtic iron helmets, La Tène type swords, heads of shafted weapons, parts of shields, and chain belts for attaching sword scabbards on hips. The state of preservation (fire patina, lack of organic parts) implies that weaponry was burnt before deposition. A meticulous analysis of these helmets demonstrated that these were not local artefacts, but ones captured from incomers from the east Alpine territories.

The Celts were also depositing weapons in rivers, e.g. the Thames, the Witham,[26] the Ljubljanica (in the aforementioned cases especially parade weapons),[27] and some watercourses of Spain.[28] An important group of watery sacrificial finds dated to the Late Bronze Age, but with special reference to the Celtic world, are helmets. They could have represented heads, so their deposition may have been meant to replace the sacrifice of severed heads.[29]

Apart from that, weapons were hung on bridges over rivers or lake bays, and after some time they fell into the water (e.g. the famous site of La Tène upon Lake Neuchatel).[30] Weaponry could have also been placed directly in lakes (e.g. Llyn Cerig Bach in Wales).[31] However, what is of greatest interest are land sanctuaries of northern Gaul: Gournay-sur-Aronde and Ribemont-sur-Ancre. In the first case, a rectangular palisade with adjacent ditches on both sides marked the sacral space (temenos). A gate on which weapons and human skulls were hung led to the interior. In the sacral zone there was also a grove. Main sacrifices of animals, humans, and ritually destroyed weapons were made in the ditch which adjoined the palisade from the inside, while only cattle offerings were made in pits surrounding the central temple. This simple premise originated as early as the fourth century BC, but the main period of its use was the third–second centuries BC. Sacrifices were abandoned in the late second century, but the premise revived in the times of Augustus, when a Gallo-Roman cult place was founded there. It was therefore a long-lasting phenomenon that was related to multiple offerings to war deities. These offerings were the first booty after victorious encounters with adversaries of various kinds.[32] At Ribemont-sur-Ancre, remains of an impressive monument of triumph were uncovered. It was erected by the Belgae (the Ambiani; later on, this tribe became fully Celticized) in the mid-third century

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[24] Tagliamonte 2016.

[25] Egg and Gleirscher 2016.

[26] Bradley 1990, 160–61 fig. 37; Farley 2011, 102–05 table 1.

[27] Istenič 2016, 279–85.

[28] Graells i Fabregat and Lorrio Alvarado 2016.

[29] Decapitation was practised by the Celts (see: Gierek 2013, 315–43 — with examples from written sources, iconography, and archaeology), and to some extent by the Germanics as well, cf. a severed head with the Suebian knot from Osterby and a decapitated bog body from Dätgen in northern Germany — Asingh 2007, 307, 310, with further reading. See also an Early Roman Period inhumation grave in Cairn 4 in Brostorp, Öland, where the head was at a distance of a few metres from the rest of the body — Rasch 1991a, 66 fig. II:29, as well as Grave 6 from Wulfen in central Germany from the Early Migration Period. In this case, the non-cremated deceased was interred with an axe in his hand. His head had been probably cut off with this particular tool — Schmidt 1985, 289 fig. 8:2. Severed heads were also depicted on weapons (cf. Chapter 5). A reason behind such actions was perhaps an intention to take over the power of the enemy, which, as it was believed, was located in the head. This is why Celtic warriors decapitated their enemies and then boasted about their heads. They nailed them to doorframes, attached them to horse tacks, or kept them conserved in chests in order to swagger with them if needed — Diodorus Siculus, *Library of History* (*Βιβλιοθήκη Ἱστορική*), v. 29; examples from the Celtic world were gathered, e.g., by Aldhouse-Green 2006, 298–301.

[30] Vouga 1923.

[31] Fox 1946; MacDonald 2007. An interpretation of the finds from Llyn Cerig Bach as cargo of a wrecked ship (Roberts 2002) must be considered unfounded. This is because of the fact that artefacts that were found in the lake-bog come from the time span from the third century BC until first century AD. Thus, they are a testimony of a long-lasting practice and not of a single act. Therefore, we may be dealing with deposits of spoils of war, maybe even in a pan-Celtic sanctuary. Apart from that, the discovered items fit within the pattern of sacrificial artefacts (among others, weaponry, a chariot, iron commodity money, a chain for cuffing prisoners, tools, bits) and not of goods which were transported by a ship in such an assemblage. Furthermore, a trade destination for the weapons is also denied by ritual damage identified on them.

[32] Brunaux and others 1980; Brunaux 1997, 569–84; 2018.

BC after a victory over the Celtic Armoricans. Remains of about one thousand warriors who had fallen in battle (and were decapitated, according to the Celtic habit), as well as thousands of their weapons, were deposited within a 50 m long rectangular ditch and in a nearby polygonal premise. The dead were placed in a vertical position, possibly at posts, and weapons were found next to their corpses. The bodies were often deprived of limbs or parts of torsos, which were used for the construction of so-called ossuaries — cuboid structures built from long bones. Cremated remains of humans and horses were deposited in the separated free space in the ossuaries. Apart from that, there were platforms adjoining a palisade which surrounded the sacral circle. A truly infernal army crowded on these platforms — Celtic warriors with full equipment, obviously with no heads. Their bodies must have been conserved soon after the battle. It is hard to imagine this enormous enterprise, especially with regard to its logistics. The temple was maintained in perfect condition for many years, terminated by the conquest of Gaul by the Romans. In 30 BC, after a period of break in cult practices, the feature became dilapidated and the bones were buried. Then, a Gallo-Roman temple was built in this place. In the second century AD it became a public cult centre, but this was no longer a Celtic cult.[33]

Influences of the three traditions discussed above formed a new phenomenon of Scandinavian weaponry deposits. Although weapons in water environments are found as early as the Bronze Age, it is only since the mid-fourth century BC that large deposits with weaponry are confirmed in Scandinavia (Hjortspring on Als Island). However, their highest number falls within the Younger Roman Period, i.e. the second half of the second and the third centuries BC.[34] In this period, apart from the small ones, there are also mass deposits which include between several hundred and several thousand artefacts. Such sites are concentrated in the eastern part of Jutland and on the Danish islands, especially in Funen. In other parts of Scandinavia they are sporadic. This custom apparently starts to disappear in the Late Migration Period, when individual sax-type swords or axes began to be deposited in rivers.[35] In this time in some Scandinavian cult centres, such as Sorte Muld in Bornholm and Uppåkra in Scania, heads of shafted weapons were ritually destroyed in squares in front of temples.[36]

Concerning bog sites, a discussion on their interpretation has been going on for more than a hundred years.[37] Two basic approaches have been proposed. According to the first one, weapon finds were a result of the long-lasting use of a given water body as a place for making small deposits. On the other hand, followers of the second interpretation believed that a deposition of weaponry in a lake (which eutrophicated, accumulated sediments, and became a bog in the course of time) was a short-time act that had been undertaken on a mass scale. This question was solved in favour of the second interpretation, which is supported by chronological analyses of discovered artefacts. On the other hand, there is no doubt that not only large deposits, but also those of medium and small sizes were also made; particularly in the Late Roman Period and the Early Migration Period the collection for offering used to be sorted and only less numerous but more precious artefacts were selected, which were part of leaders' equipment. This was explained with the *pars pro toto* principle, according to which the sacrificed part of the equipment was symbolically replacing the whole assemblage.[38] It is most commonly assumed that deposition of weaponry was a result of victories of local populations over invaders. Weapons that were captured on such occasions were offered to deities by placing them in the water. Ancient narratives are quoted in support of this hypothesis. They demonstrate that captured weapons were sacrificed by the Cimbri after the Battle of Arausio in 105 BC,[39] the Hermunduri after their victory over the Chatti,[40] or by the Goths.[41] Although these narratives vary in details concerning the treatment of weapons (the Hermunduri were also to sacrifice horses and defeated enemies, the Goths were to hang weapons on tree trunks, and the Cimbri were to cut mail armour, tear clothes into pieces, break so-called phalerae or decorative parts of horse tack, drown horses, and throw gold and silver into rivers, and hang defeated warriors on trees), a common element was the ritual sacrifice of weaponry.[42] It must be underlined here that the absence of human bones at such sites does not mean that defeated enemies were treated in a chivalrous manner. This is disproved by a sensational recent discovery from Alken Enge in Illerup Valley, but far away from the largest known deposit of Illerup Ådal. Numerous human bones were found at this site, i.e. a minimum of eighty-two young adult males, but the total population is estimated to be greater than 380 individuals. These bones were most often in non-anatomical positions, with evident traces of combat. They were dated with the radiocarbon method to the first half of the first century AD. In all probability, they belonged to defeated warriors and remained for some time (between six months and one year) on the battlefield, which is suggested by animal teeth marks. Later on, the remains were removed and thrown into the lake from the edge of sand-spits extending out into the body of water, so we are probably dealing with a ritually embedded clearing of the battlefield. Apart from that, bones in anatomical arrangement were also found. They belonged to people who were not killed during the combat, but may have been executed afterwards, which may be an example of the post-battle treatment of the captured fighters. Several clubs were also found, possibly the tools with which the executions were carried out.[43] Therefore, there is a grain of truth in the aforementioned ancient narratives which speak of making human sacrifices.

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[33] Fercoq du Leslay 1996; Brunaux 1997, 585–600; 2008.

[34] In the past it was believed that the Hjortspring deposit demonstrated no relationship with far later sites from the Roman Period. However, at present this temporal distance between these phenomena 'fills' to a greater and greater degree with new sites from the Late Pre-Roman Period (approximately the last two centuries BC) and from the Early Roman Period, cf. Ilkjær 2003; Kaul 2003a, 219–21.

[35] Pauli Jensen 2009a, 59.

[36] Helgesson 2004, 223–39; Iversen 2009; Lund Hansen 2009.

[37] For a summation of the discussion see Ilkjær 2003, 60–63; Lund Hansen 2003.

[38] A new classification of types of bog deposit, taking into consideration their size and composition, has recently been proposed by Nørgård Jørgensen 2008, 157–58; 2014, 249–50.

[39] Orosius, *Historiae adversus paganos*, v. 16, 5–6: 'hostes binis castris atque ingenti praeda potiti noua quadam atque insolita exsecratione cuncta quae ceperant pessum dederunt; uestis discissa et proiecta est, aurum argentumque in flumen abiectum, loricae uirorum concisae, phalerae equorum disperditae, equi ipsi gurgitibus inmersi, homines laqueis collo inditis ex arboribus suspensi sunt, ita ut nihil praedae uictor, nihil misericordiae uictus adgnosceret'. Translation by I. W. Raymond, revised by A. T. Fear in *Histories against the Pagans*: 'Having gained possession of both camps and of a huge amount of booty, the enemy by some strange and unusual curse completely destroyed everything they had captured; clothing was cut to pieces and strewn about, gold and silver were thrown into the river, the breastplates of the men were hacked to pieces, the trappings of the horses were ruined, the horses themselves were drowned in whirlpools, and men, with nooses fastened around their necks, were hanged from trees. Thus the conqueror realized no booty, while the conquered obtained no mercy'; see: <http://attalus.org/info/orosius.html> [accessed 2 July 2021].

Weaponry underwent various treatments before deposition in water. On the basis of studies by Andreas Rau it is possible to point out an entire spectrum of actions:[44] leaving weapons intact, 'decapitation' of spears, i.e. cutting off the spearhead immediately under the socket (perhaps a reference to the custom of beheading of enemies?), or enormously intensive destructions. These were sometimes repeatable and required the 'mistreated' artefact to be held. In other cases they were chaotic and resembled *furor teutonicus*, which referred not to the enemies, but to their property. Precious artefacts were destroyed in an especially intensive manner. Fury was also taken out on horse tack, and even on captured horses. It is not always possible to observe ecstatic emotional fury in these cases: some artefacts were destroyed in a very systematic way and strokes were delivered very precisely. On the other hand, aggression has many faces and we can imagine a raging Germanic warrior who persistently and rhythmically hits the same part of the weapon which is being destroyed. The very fact of destruction can be explained by analogy to the Bronze Age offerings, that is, as a testimony of a sacrifice and not a gift. Perhaps, as in the case of Roman habits, destruction was to eventually annihilate the adversary. Furthermore, the possibility cannot be excluded that the aim was to render the use of weapons against the living impossible. Alternatively, perhaps the ritual 'killing' of weapons was intended to provide them with an identical status to their owners, thanks to which the weapons could still be used in the other world.[45] Yet another interpretation assumes that the aim was to provide weapons with a sacral nature so that they could be used in the final stage of funeral rites. Perhaps the act of destruction re-enacted the final fight in which weapons took part. There is insufficient evidence to propose an unequivocal answer, which naturally leaves room for speculation.

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[40] Tacitus, *Annales*, XIII. 57: 'sed bellum hermunduris prosperum, Chattis exitiosius fuit, quia victores diversam aciem marti ac Mercurio sacravere, quo voto equi viri, cuncta viva occidioni dantur.' Translation by A. J. Church and W. J. Brodribb: 'The war was a success for the Hermunduri, and the more disastrous to the Chatti because they had devoted, in the event of victory, the enemy's army to Mars and Mercury, a vow which consigns horses, men, everything indeed on the vanquished side to destruction.'

[41] Jordanes, *Getica*, V. 41: 'Quem Martem Gothi semper asperrima placavere cultura (nam victimæ ejus mortes fuere captorum), opinantes bellorum præsulem apte humani sanguinis effusione placandum. Huic prædæ primordia vovebant, huic truncis suspendebantur exuviæ, eratque illis religionis præter ceteros insinuatus affectus, quum parenti devotio numinis videretur impendi.' Translation by C. C. Mierow: 'Now Mars has always been worshipped by the Goths with cruel rites, and captives were slain as his victims. They thought that he who is the lord of war ought to be appeased by the shedding of human blood. To him they devoted the first share of the spoil, and in his honor arms stripped from the foe were suspended from trees. And they had more than all other races a deep spirit of religion, since the worship of this god seemed to be really bestowed upon their ancestor' see: <https://archive.org/details/gothichistoryofj00jorduoft/page/n3/mode/2up> [accessed 2 July 2021].

[42] Archaeologists underline other instances of weapon offerings without using water environment, see e.g. actions undertaken by the Germanic people on the battlefield after the Roman defeat in the Teutoburg Forest in AD 9. Whitening, piled or scattered human bones, accompanied by weapon fragments and horse skeletons would be a testimony of such actions. This dreadful image was completed with human skulls nailed to tree trunks. In the light of Tacitus's narrative (Tacitus, *Annales*, I. 61), this is what was seen by Roman troops who arrived on the battlefield under the command of Germanicus a few years after the battle. Both the report of Tacitus as well as the archaeological record of the image he depicted that was discovered in Kalkriese near Osnabrück (it was possible to find the battlefield of the Teutoburg Forest in this location) allow for assuming that the Germani turned the battlefield into some sort of a sanctuary, see von Carnap-Bornheim 1999, 495–508. Yet another attempt at identifying a cult place where weapons were deposited has recently been undertaken concerning a site in Pikule near Janów Lubelski. At this site, burnt human bones, tools, pottery, and ritually bent weapons from the period of about the first half of the first century BC (end of Phase A2 and the early Phase A3) were found on the original ground level: Kokowski and Łuczkiewicz 2002; Łuczkiewicz 2007. Regrettably, due to the fact that this site was almost totally destroyed by treasure hunters using metal detectors and the entire archaeological context was lost, such an unequivocal interpretation does not seem fully justified.

[43] Holst and others 2018; Løvschal and others 2019.

[44] Rau 2016.

Offerings of selected precious parts of a defeated commander's equipment, which is characteristic of late deposits, are explained via an analogy to Roman *spolia opima*. These were highly prized spoils of the gear of a beaten leader which were placed on a post. Then, they were carried in a procession to the Capitol in order to be offered in the Temple of Jupiter Feretrius. Such an interpretation[46] seems to be more convincing than — as has been proposed previously — reference to the rather imprecise term of *pars pro toto*.

In some cases, there were two one-time deposits at the same site. This seems to imply that sacral zones for different deities were isolated — examples of temples dedicated to individual gods and goddesses are known from a land cult complex in Oberdorla in central Germany.[47]

It is interesting that detailed examinations of finds from Scandinavian bogs demonstrate that artefacts come from various regions differing from the place of their deposition, analogously to some sacrificial deposits from the Celtic world. In this way, it became possible to point out areas of departure for military expansion chiefly aimed at the eastern part of Jutland.[48] It became an object of attacks, perhaps due to its strategic location allowing for control of sea trade (vicinity of the Danish Straits). In the Younger Roman Period and in the Late Roman Period huge amounts of Roman imports found their way to eastern Zealand, which became a political and economic centre in that time. The same occurred later on Funen (we chiefly know of metal and glass vessels, but other goods which are difficult to identify for archaeologists, such as textiles, wine, etc., may have also gotten there). Furthermore, Roman swords from some sites, especially from Subphase C1b (*c.* the first half of the third century) are so numerous and so homogeneous in their forms and chronology that they seem to be a result of trade,[49] representing the completion of mass orders of expensive high-class Roman weapons. Presumably, the mentioned centres of power extended their influence over the eastern coasts of Jutland. This seems to be supported by the fact of effective (planned?) organization of defence against invaders. We know various kinds of wooden barriers which crossed fjords (having been the shortest way to the inland). Near the famous bog site of Illerup there was a settlement of Priorsløkke that was deserted and rapidly converted into some sort of a defensive point, which guarded the landing place in the fjord. Furthermore, there are observation points which delayed the advance of invaders, etc.[50] The most probable 'candidate' for the organization of defence is actually the centre in Zealand, whose position was manifested in an extremely rich burial ground in Himlingøje. It was in the best interest of local elites to maintain control over strategic parts of the trade route, which brought enormous profits to the rulers of Zealand. It was from there that goods coming from Rome were redistributed. Furthermore, other proposals were also put forward. According to these, the Zealand centre was an organizer of invasions and made use of mercenaries from the territory of Norway or western Sweden.[51] So far, it has not been possible to determine this issue on the grounds of archaeology. On the other hand, we know the names of some of the leaders of the defeated party. Thanks to runic inscriptions on spearheads and shield grips or even on combs we know the names of their owners (in some cases one can also learn the manufacturers or weapons' names).[52] Such names as HARJA, NITHIJO, WAGNIJO, SWARTA, or LAGUTHEWA complete

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[45] Czarnecka 2004, 101–02.

[46] Rau 2016, 179–80.

[47] Behm-Blancke 2002–2003.

[48] On the other hand, an assumption proposed by Lars Jørgensen seems to be completely untrustworthy. He suggested that weapons of foreign origin in Jutland bogs demonstrated that people from Jutland had been undertaking distant military expeditions. In his opinion, weaponry captured in such expeditions was to be brought home and it was sacrificed there to deities. This was putatively evidenced by sorting and destroying of weapons, which in the opinion of the Danish researcher was dictated by logistical reasons, that is, the better capaciousness of boats; cf. Jørgensen 2001, 15–16. Apart from the obvious ineffectiveness of such actions (it is easier to pack straight swords on the bottom of the boat), such an assumption is also disproved by the fact that weapons of compact shapes (shield bosses, axes, spearheads) underwent destruction, too, not to mention astonishingly broad military objectives that Jutland warriors must have had in mind.

[49] Cf. Godłowski 1985b, 346–47; Lund Hansen 1987, 225; Kaczanowski 1994a, 220; Biborski and Ilkjær 2006, 390.

[50] Kaul 1997; Nørgård Jørgensen 1997; 2001.

[51] Kaul 1997, 142–44.

[52] Stocklund 1986.

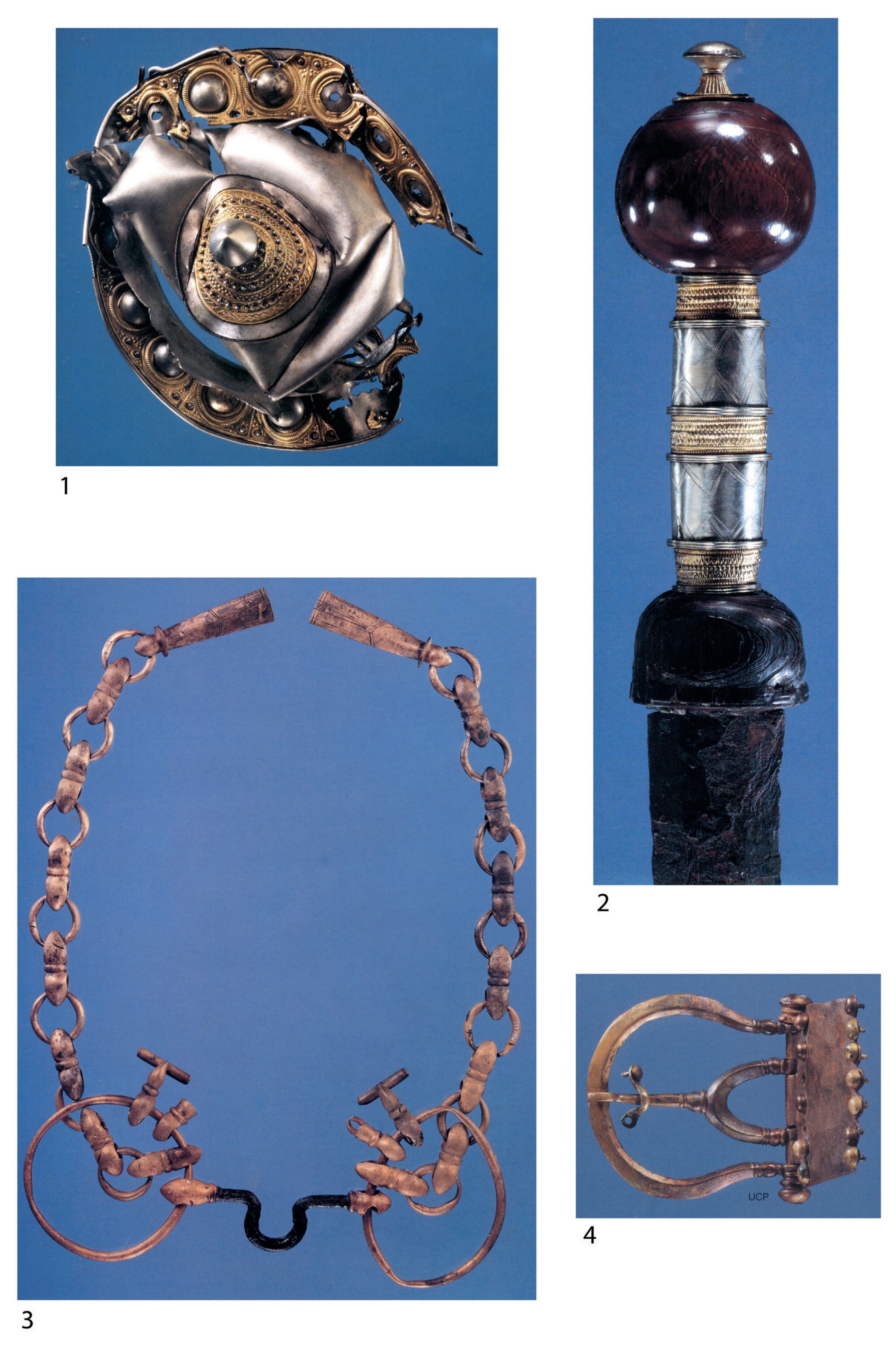

Figure 1.2. Markers of the highest position in the warrior hierarchy on the basis of finds from Illerup. 1 — shield boss ornamented with silver and gilded fittings, 2 — sword provided with a hilt of silver and gilded sheets, 3 — bronze horse tack with an iron bit, 4 — bronze buckle with an immobilized tongue (after von Carnap-Bornheim and Ilkjær 1996, pls 5, 107, 123, 130).

the picture of the so-called Scandinavian wars. We know so much about these thanks to archaeology and for individual phases we even know the directions of attacks, homelands of invaders, and their allies. On the other hand, ancient written sources say nothing about these conflicts.

Examinations of bog sites provide a huge amount of data concerning the structure and equipment, and the quantity of information was especially large in the case of research at Illerup. By means of grouping finds according to their raw material and technology of manufacture, and by analysing their numbers, distribution, and chronology, it was possible to isolate weaponry that was an indicator of three groups of warriors.[53] Using an analogy to the narratives of Tacitus in *Germania*, the first group would include chieftains (*principes*), who used precious weapons ornamented with gilded silver fittings that were decorated according to local traditions (Fig. 1.2). What was ornamented in this way were metal fittings of shields (shield bosses, grips, fittings of shield planks), sword parts (hilts and scabbards), horse tack and belt parts (hip belts and *baltei* which were carried on the shoulder and on which swords were suspended). Belts on which swords were suspended had buckles with spikes that were permanently attached to the thong using riveted metal sheets, which rendered their adjustment impossible. This seems to imply their one-time adjustment for the requirements of a specific person — their owner. A more numerous group (*comites*), which occupied a medium position in the hierarchy, encompassed foot warriors who used bronze shield fittings, sword scabbard mounts, and belt fittings (shining bronze looked attractive and resembled gold). Apart from that, they were armed with javelins and spears. Such individuals may be considered responsible for smaller groups of warriors that were composed of 'common' infantrymen (*pedites*). The latter were the most numerous group and used spears, javelins, and shields with iron fittings (Fig. 1.3). Proportions between groups isolated in such a manner were 1:7:60 warriors (2:9:89 per cent).[54] Similar results were obtained after processing finds from the site of Ejsbøl, where these proportions were on the level of 12–14:60:>100 (hundred and several dozen) warriors. However, archaeological indicators demonstrating a pertinence to a given class were somewhat different.[55] In certain offering sites one may also find boats captured from the attacking units; that allows for a comparison between the number of crew members and the reconstructed retinue size. The similarity is striking. The Hjortspring

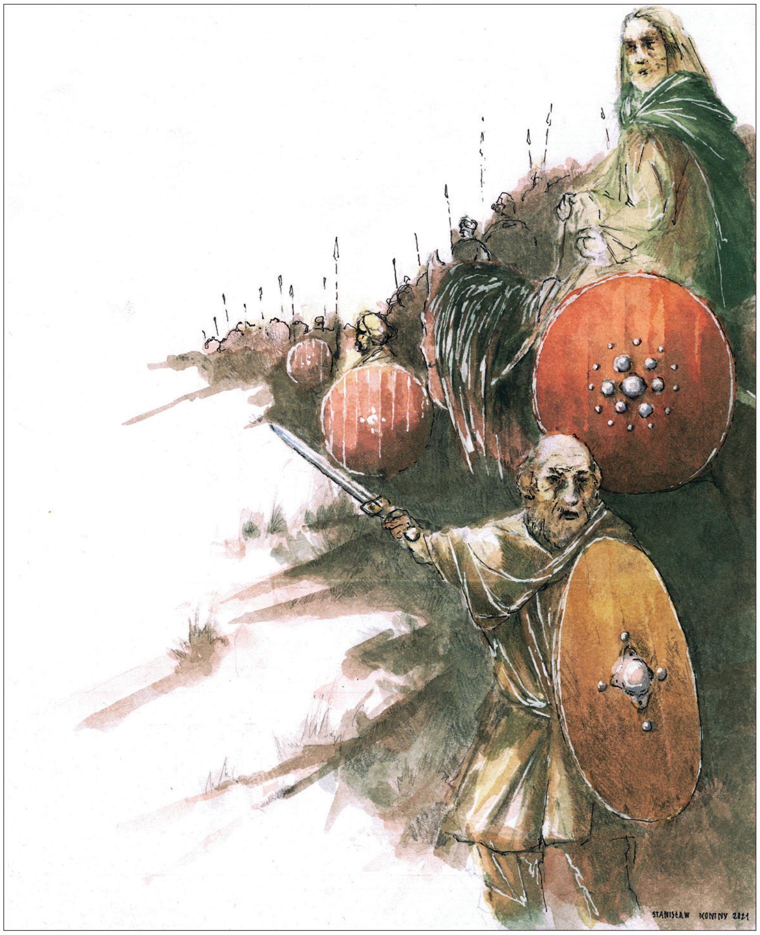

Figure 1.3. Hierarchy of warriors based on the finds from Illerup (drawing Stanisław Kontny, concept by Bartosz Kontny).

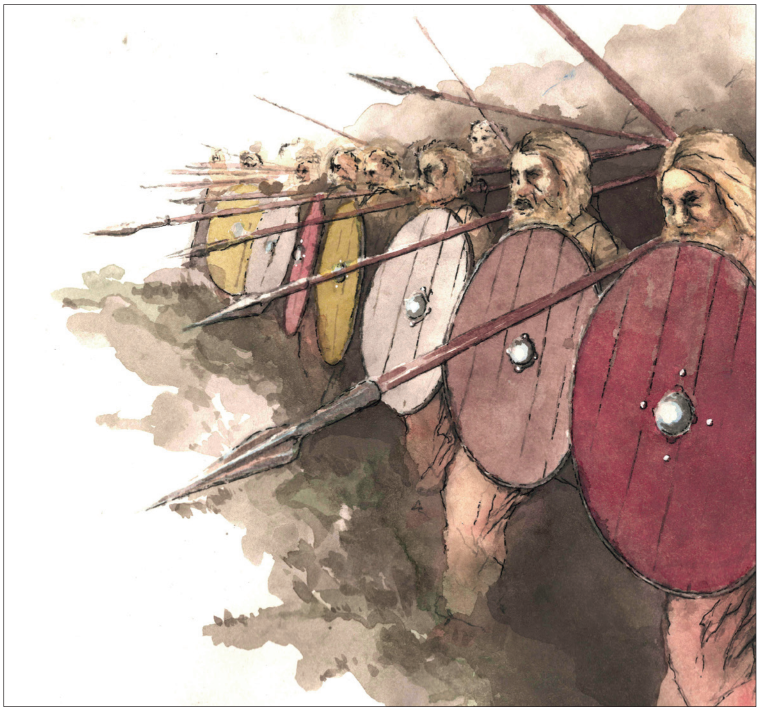

Figure 1.4. Battle order based on the finds from Illerup (drawing Stanisław Kontny, concept by Bartosz Kontny).

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[53] von Carnap-Bornheim and Ilkjær 1996, 483–86.

[54] von Carnap-Bornheim and Ilkjær 1996, 484.

[55] Ørsnes 1988, 25.

basic units, counted on the basis of the finds from the site, embraced a platoon of about ten men, i.e. nine warriors and a leader. It matches the crew size of the Hjortspring boat — *c.* two platoons per boat (including two non-rowing leaders).[56] The best parallel to the Nydam-type boats can be found in Deposit A from Illerup. Although it is difficult to assess the full sizes of the invading armies, it is possible to calculate the sizes of certain units/retinues.[57] At Illerup there were five–seven high-rank warriors plus thirty middle- and *c.* three hundred lower-rank ones,[58] which means the ratio of 1:5:50, or *c.* fifty-six men in a particular unit. Comparing the Illerup retinues with crews of Nydam Boats A and B it seems that a 'platoon' should be divided into two watercrafts. Deposit Ejsbøl North has a better parallel in Nydam Boat C, as rivets from a vessel of such size were found there. All in all, the smallest military units are good equivalents of a clinker-boat crew (twenty-two–thirty oarsmen). Long-distance journeys in the sailless epoch demanded trained and well-knit teams of rowers/paddlers and so they were — the retinue members![59]

Thus, the Baltic Sea served as a route used for military purposes.[60] It is proved by particular watery weapon deposits in which both fragments of a craft and archaeological material analyses prove that the invaders came from abroad, using vessels.

This hierarchy was not necessarily identical in each case. Its borders were not necessarily sharp and it is certain that it underwent some changes in the course of time. Furthermore, the problem of the place of archers in this hierarchy has not been solved so far. Archers gradually increased in importance in Scandinavian armies in the Younger Roman Period and in the Late Roman Period. Finds of bows are rather numerous at bog sites. However, their draw weight was relatively low, in spite of the large sizes of bows (about 200 cm in length). This suggests that the combat significance of bows could be low, in favour of a more prominent role as hunting weapons. However, in light of the most recent findings,[61] it seems that archer detachments did appear in Scandinavia at some point and were strategically used in combat.

The reconstruction of the structure and weaponry of Scandinavian armies allows for an attempt at reconstructing ways of combat. A detailed analysis is beyond the scope of this work, but it can generally be said that fighting was done on foot, in all probability in a battle order. This is demonstrated by huge sizes of shields (about 100 cm in diameter) which were provided with convex hemispherical bosses. These were extremely effective in parrying strokes but were not very good for striking. Shields of this kind could be used in defensive combat as they also allowed the protection of the closest comrade-in-arms. Completely preserved shafted weapons from Scandinavian bog sites (some longer than 3 m) prove that Scandinavian pole weapons were longer than the ones from other regions of Barbarian Europe, where they usually somewhat exceeded the height of warriors and were *c.* 2 m long (see Chapter 4).[62] Such long spears were useful when combined with a battle order (Fig. 1.4). Another premise that suggests the existence of centralized command is an increase in the role of archers. Their effectiveness is related to their proper deployment in the battle order (on the flanks) and skilful use during the battle (generally in its initial phase).[63]

Therefore, bog sites allow for learning about military, ritual (reconstruction of the destruction process and means that were applied, or of a chronological variability of the phenomenon), and logistical issues, including questions of transportation (invaders were coming from faraway places, which is confirmed by remains of boats discovered next to weaponry; it also offers an opportunity to learn about shipbuilding in the period in question).[64] Furthermore, problems of other activities can also be examined. An army needs 'feldshers' and craftsmen, so finds of surgical or craftsmanship tools in bogs are not surprising. Bog finds even provide data for the studies of music in the past — a fragment of a wind instrument, used probably for scaring enemies, was discovered at the site in Nydam.[65]

Apart from that, symbolic representations related to Scandinavian beliefs are also discovered on artefacts from bogs.[66] Among the most eagerly used motifs, there is a depiction (usually a protome) of a bird, which is identified as a raven (Fig. 1.5). This motif was often integrated into the structure of a sword scabbard slide, but it can also be seen on the visor of a Roman helmet from Thorsberg. It was provided with a number of ornaments by a local craftsman. These decorations included an ornamental silver band[67] with a motif of the raven's head.[68] It can also be found on a Germanic shield boss (albeit made from a silver Roman vessel) from a

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[56] See Kaul 2003c, 178–79.
[57] See Kontny 2003.
[58] Ilkjær 1994, table 1; 1997, 56–61.
[59] Kontny 2023a, 122–23.
[60] von Carnap-Bornheim 1997.
[61] Pauli Jensen 2009b.
[62] Kontny 2008a, 116–17 fig. 5.
[63] Kontny 2008a; 2008b, 194.
[64] See Kontny 2023a, with further reading.
[65] Ilkjær 2002b.
[66] Petersen 2003.
[67] Raddatz 1987, pls 90–91; Matešić 2015, 196–207, 509–10 pl. 103.
[68] Becker 2000, 142–45.

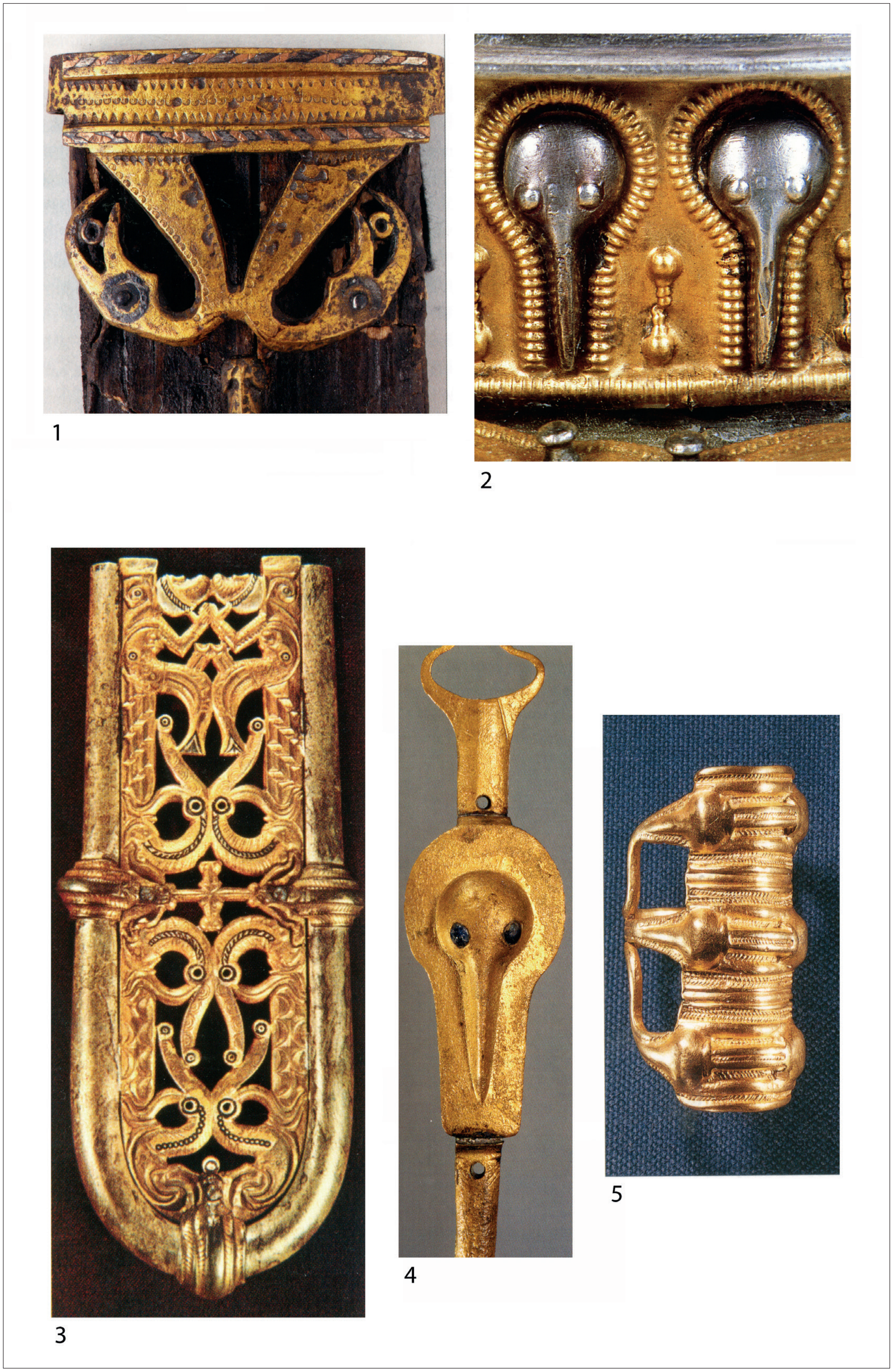

Figure 1.5. Raven motif on the basis of Scandinavian and Elbe Germanic finds. 1 — mouth (upper fitting of the scabbard) of a sword from Kragehul, 2 — motif ornamenting the wall of a shield boss from the Gommern grave, 3 — scabbard from Nydam II, 4 — sword scabbard slide from Vimose, 5 — ring from Grave 1978 in Himlingøje (1, 3–5 — after Petersen 2003, figs 5, 8–10; 2 — after Becker 2000, 144).

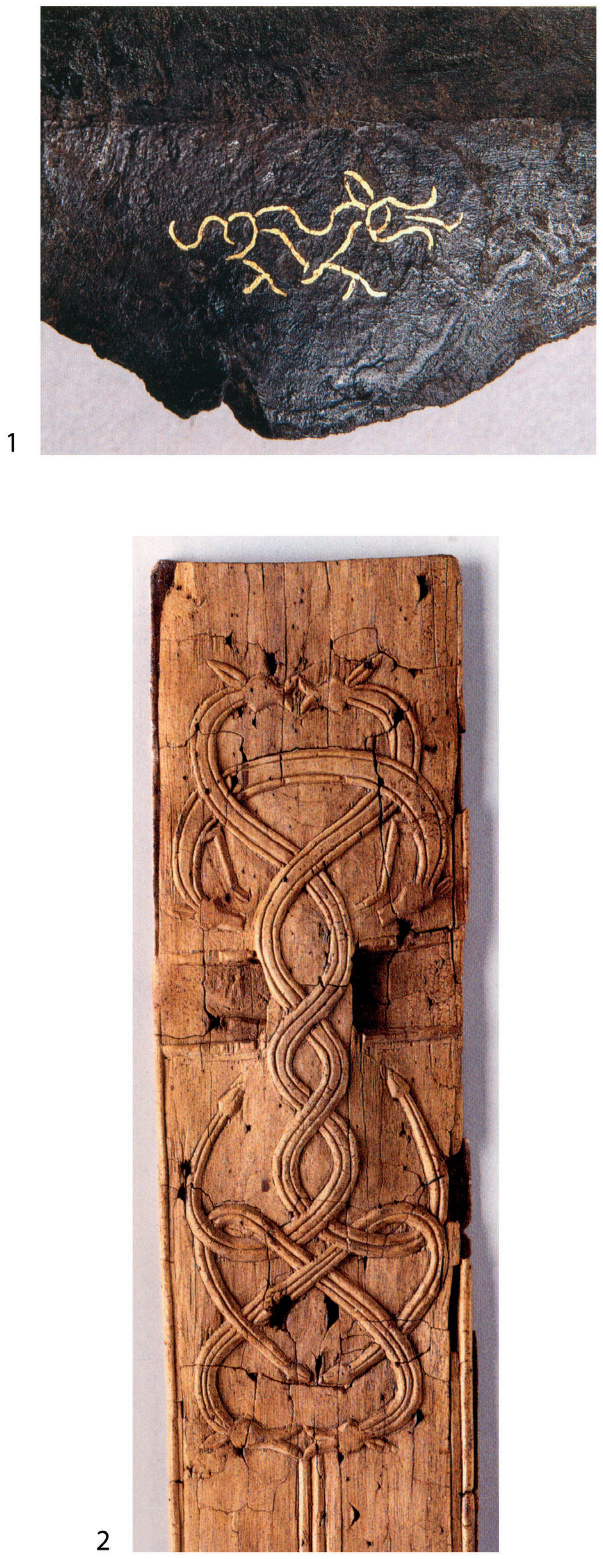

Figure 1.6. Other zoomorphic motifs on weapons from Scandinavian bog sites. 1 — gold-inlaid depiction of a wolf (Fenrir?) from the site of Nydam IV, 2 — two pairs of dragons on the wooden scabbard from the Nydam Id deposit (after Petersen 2003, figs 1, 2).

magnificent grave in Gommem in Germany,[69] as well as on numerous gold rings from Scandinavian graves.[70] The significance of this motif is not completely clear. On the one hand, the raven played an important role in the military symbolism of the Celts, from whom the Germanics learned a great deal. On the other hand, this animal certainly acquired new and native significance in the Germanic world. This is demonstrated by later sagas (e.g. the ravens Huginn and Muninn accompanying Odin — the god of war).[71] Attention is also drawn to a more down-to-earth source of associations of the raven with war. It was the first animal to appear on the battlefield, feeding on human remains.[72] Therefore, it somewhat fulfilled the function of a psychopomp, or a guide to the other world (Valhalla). Therefore, it is of no surprise that on the scabbard of a sword from the bog site Nydam II there are depictions of birds sharing dead bodies of warriors (Fig. 1.5:3).[73] Moreover, on the scabbard mouth of a sword from the Kragehul bog there are images of ravens holding gouged-out eyes (possibly human ones) in their beaks.[74] It was the eyes of the fallen that first fell prey to birds as an easily accessible delicacy (Fig. 1.5:1). Naturally, ravens were provided with a number of other meanings in various cultures. These included associations with war booty, plundering (which does not contradict the aforementioned assumptions), but also with illnesses, death, the evil soul, as well as wisdom, light, sun of providence, etc.[75]

What is more, depictions of wolves on Scandinavian artefacts are not surprising, either. Let us refer to, e.g., a gold-inlaid depiction from a spearhead discovered at the Nydam IV bog site (Fig. 1.6:1).[76] It is believed to be connected with Fenrir — the wolf which is to play a fatal role during the day of doom of the gods, *Ragnarök* — but one also has to remember pairs of predators: Sköll and Hati, the sons of Fenrir who gradually devour the sun and the moon,[77] or Geri and Freki who accompany Odin.[78] Wolves also frequently accompany *fylgjur* — supernatural female characters who protect warriors, aid them in combat, and announce oncoming death.[79]

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[69] Becker 2000, 142–45; 2010a, 108–09 pls 17, 35, 62.

[70] Petersen 2003, 290 fig. 8.

[71] Snorri Sturluson, *Edda*, *Gylfaginning*, 20 (38), see Słupecki 1998, 160–61.

[72] An expression 'to feed ravens' in various versions is often used in sagas as a synonym for the extermination of enemies, cf. *Hrafnsmal that Is Raven Song*, 3; Poetic Edda, *Helga kvida Hundingsbana*, I. 5; Poetic Edda, *Gudrunarkviða*, II, 8–10; Snorri Sturluson, *Edda*, passim.

[73] Bemmann and Bemmann 1998, 223–24 pl. 233.

[74] Engelhardt 1867, pl. I:7.

[75] Cf., e.g., Szyjewski 1991; Green 2001, 68.

[76] Petersen 2003, 286.

[77] Słupecki 1994, 71–81, with further reading and other examples.

[78] Poetic Edda, *Grímnismál*, 19; Aðalsteinsson 2007, 205–07; Oehrl 2011a, 115–21.

More images of this kind are known from the discussed period. A similar figure is depicted on one of the spearheads from the Vimose bog site (gold inlay).[80] Wolf symbolism also appears in the Germanic world in a different context: on Trajan's Column in Scene XXXVI there are images of Germanic warriors in Roman service. They are dressed in hoods made from wolf hides (Fig. 1.7:1).[81] Among numerous images from the Merovingian Period (late fifth–seventh centuries) in western Europe, attention is drawn to a depiction of a warrior with the wolf's head from the scabbard of an Alamannic sword from Gutenstein in Baden-Württemberg,[82] dated to about 600 (Fig. 1.7:3). A similar figure accompanying Odin — the god of war can be seen on a patrix for making platelets which ornamented helmets from Torslunda in Öland. This patrix is dated to the late sixth–seventh centuries (Fig. 1.7:2).[83] Furthermore, wolf-like warriors can also be found on the large horn from Gallehus (so-called Horn A) in Jutland, dated to *c.* 400 or the early fifth century.[84] Such depictions are interpreted as a sword dance, which is somewhat related to the narrative of Tacitus that was mentioned at the beginning of the chapter.[85] Another analogous image can be seen on an metal plate from Fen Drayton, Cambridgeshire (seventh century). What is depicted in this case is a warrior with a sword and a javelin. The warrior has a wolf's head (shown in profile) and a tail.[86] What can be added here is the image of a warrior in a wolf hide holding a sword with an ornamental ring (a so-called ring-sword) — a testimony of being part of the elite — as well as a spear. This image is displayed on an embossed metal sheet from Obrigheim, Bad Dürkheim District.[87] According to Høilund Nielsen, in sixth–seventh-century art warriors with helmets provided with crests shaped as wild boars and eagles were depicted in different contexts than warriors dressed as wolves. This implies that we are dealing with different formations, and the other group — due to the presence of swords — was placed higher in the social hierarchy. What is more, the relationship of this group to the world of religion can also be seen. This perhaps resembles berserkers who were falling into battle fury and placed themselves in the power of Odin. Also such 'wolf-like' *úlfheðnar* devoted themselves to this deity.[88]

An association of this predator with war or battlefield, apart from the raven and the eagle,[89] is exemplified in the north European cultural zone by the practice of providing swords with wolf-like names, such as, e.g., *Vargr*, *Verúlf*, or *Ylfingr*. This was related to the aggressiveness and fighting skills of this animal.[90] The name of the wolf was often part of names of many historical personages, or even a proper name (*Ulf*). It was debated on this occasion whether in the case of so-called theophoric names animal names represent deities whose proper names were considered taboo, or it was rather related to the presence of certain species in the world of Scandinavian beliefs.[91]

Among predators inhabiting the moderate climate zone, the wolf most resembles humans concerning its social behaviours:[92] it attacks in a group, it accepts the group hierarchy, and is able to act for other group members (although we are dealing here with so-called nepotic or reciprocal altruism which is characteristic of animals, and not with duty altruism which is purely human).[93] As an animal which symbolizes the lifestyle of warriors, especially young ones who formed so-called *Männerbünde* (secret associations of male youths)[94] or who were active in retinues, the wolf perfectly fits into military symbolism,[95] which is why lycanthropy was so often believed to be related to young warriors.[96] The practice of initiation in various tribes, which consisted in the fact that young men were leaving their environment and living an outlaw life in the wild, also resembles the behaviour of the wolf. For many Germanic warriors the wolf was a totemic animal which was considered a mythical ancestor.[97]

In theory, such a role could also be fulfilled by the bear. However, it is a solitary animal that acts alone,[98]

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[79] Słupecki 1998, 21–26; Szrejter 1997, 178.

[80] Pauli Jensen 2008, 72–73 fig. 25. I was able to study finds from Vimose thanks to X. Pauli Jensen, who authored a dissertation devoted to this bog site (Pauli Jensen 2008).

[81] Speidel 2004, 17–24.

[82] Bertram 2007, fig. 3; Samson 2020, 264–67 figs 7, 10.

[83] Rasch 1991b, pl. IV:21; Samson 2020, 252–64 fig. 5.

[84] Hartner 1969, fig. 47. For other premises suggesting the existence of warriors-wolves see Speidel 2004, 13–38.

[85] Cf. Nedoma 2004, 607; Teichert 2014, 140–41; Samson 2020, 267–72.

[86] Pollington and others 2010, 278 fig. 8.56; Samson 2020, 263 fig. 6.

[87] Paulsen 1967, fig. 71; Samson 2020, 267–69 figs 8, 9.

[88] Høilund Nielsen 2001, 477–79.

[89] Beck 1970.

[90] Oehrl 2011b, 72–73.

[91] See Høilund Nielsen 2001, 475–76, with further reading; Sundqvist and Hultgård 2004.

[92] Słupecki 1994; Speidel 2004, 14–15.

[93] Cf. Wierciński 1994, 30–31.

[94] Meier 2001.

[95] Cf., e.g., Birkhan 1970, 582; Kontny 2003b, 257.

[96] Aðalsteinsson 2007, 203–05.

[97] Pollington and others 2010, 462.

[98] The bear is also believed to have lunar connotations, as it remains invisible under the ground in winter and appears in spring, analogously to the disappearing and 'reviving' moon: Eliade 1993, 164, 173. It is also recorded that the bear was perceived

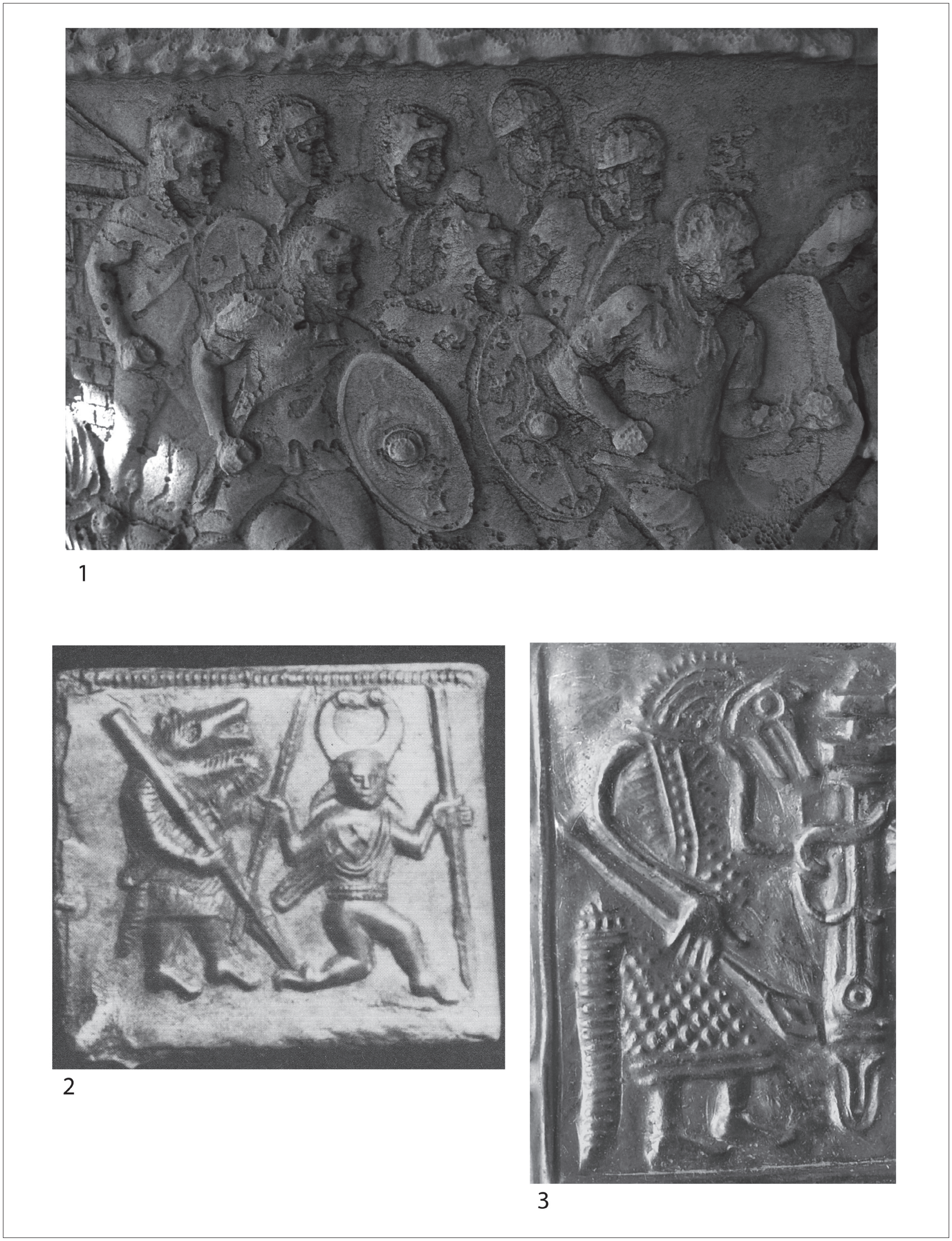

Figure 1.7. Depictions of Germanic warriors-wolves. 1 — Trajan's Column, 2 — Torslunda, 3 — Gutenstein (1 — after <https://arts.st-andrews.ac.uk/trajans-column/the-project/the-human-figure-types/tc-036-2-11/1> by Jon Coulston [accessed 3 June 2023], reproduced with permission; 2 — after Rasch 1991b, fig. IV:21); 3 — after Bertram 2007, fig. 3.3.

which is obviously less similar to the nature of warrior operations. Its symbolic role will considerably increase in the later period, for example in the occurrence of berserkers. It will also be manifested in archaeological finds, such as ornamental bear-shaped rivets holding the socket of a spearhead from Grave XII in Vendel.[99] The significance of the wolf is also demonstrated in Germanic beliefs, i.e. the aforementioned Fenrir, his sons Skoll and Hati, and Odin's protectors Geri and Freki.

Among popular motifs on weapons from bogs there is that of a pair of dragons (Fig. 1.6:2). This was placed in the top part of sword scabbards. It was known in the Celtic world[100] and was revived in Scandinavia in the Late Roman Period and the Migration Period. However, it is solely known from bog finds.[101] This is perhaps due to the fact that a considerable part of such scabbards was entirely made from wooden laths on which the motif was incised. It is extremely improbable that such artefacts could survive in graves, even if they were not placed on the funeral pyre. The dragon is the most universal motif among all that have been discussed so far. It is usually interpreted as a symbol of forces that opposed the cosmogonic order, of aquatic forces, rage, evil forces, fertility, but also of authority, strength, and magical power (the dragon is sometimes perceived as a lord of thunder).[102] It can be found on shields, standards, military emblems, or figureheads of boats of various peoples. Therefore, its presence on scabbards of Scandinavian swords is not surprising.[103] Odin himself is sometimes also depicted as a sea monster or a dragon.

However, the motif that was most often present on weapons from bog sites was the solar pattern, usually depicted as a number of silver-inlaid concentric circles (Fig. 1.8). In this case we are dealing with an enormously high number of potential meanings. What is especially worth stressing is an understanding of the sun as a psychopomp — the sun is a guide of the dead, as it itself descends to the world of the dead in the night, passes through this world with no harm, and appears again in the world of the living at dawn. The sun was also an important part of the sun-fertility-hero symbolic complex or was a symbol related to the sphere of

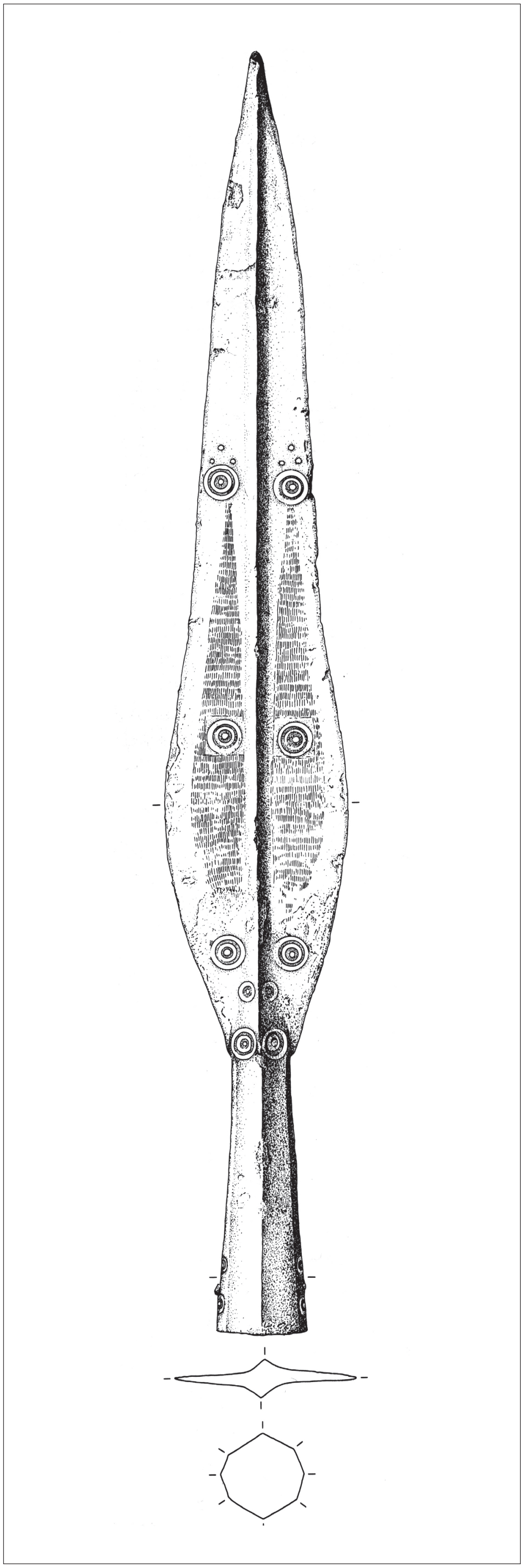

Figure 1.8. Example of the use of the solar motif on weaponry from a bog site: silver-inlaid spearhead from Illerup (after Ilkjær 1990, fig. 79).

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as a guardian of the world of the dead, the land of darkness and the underworld, as well as a demon of death. In the Celtic world the bear was associated with the social group of warriors; cf. Kiersnowski 1990, 399–404.

[99] Stolpe and Arne 1912, pl. XXXIV:5.

[100] Megaw and Megaw 1990.

[101] It is possible here to mention, e.g., wooden scabbards from the site of Nydam Id: Petersen 2003, figs 1–2.

[102] Eliade 1993, 202–03.

[103] Some zigzag marks on spearheads from the territory of the Przeworsk Culture can be considered images of dragons/snakes — see Kontny 2017a.

initiation. The solar cult was anyway very widespread in Scandinavia as early as the Bronze Age.[104]

The world of bog sites provides us with an image of Germanic armies in a way that is completely different from that offered by sepulchral finds. Concerning the latter, we can rarely be certain that even graves with the same chronology contained weapons from the same time. Chronological observations are of limited accuracy, at most to one generation (although this accuracy is still quite high compared with other time periods). On the other hand, in the case of many bogs we are dealing with one-time deposits which can be dated in a much more precise way. Thanks to the preservation of wood it is often possible to use dendrochronology. Concerning mass offerings, this results, for example, in a conclusion that some warriors were using shield fittings which were slightly outdated. A majority applied forms which were popular in a given period, but there were some who favoured technical novelties and thus promoted changes in armament.[105] This is a very practical observation, and it is merely a drop in the ocean of opportunities that are offered by studies on sites of this type.

Perspectives are enormously promising, as it has recently turned out that weapons were deposited not only in broadly understood Scandinavia, but also in areas to the south of the Baltic. Such a possibility has been taken into account for some time, and among sites that were considered possible bog sites were discoveries from Żarnowiec in Pomerelia (Wielbark Culture)[106] and a deposit from former Wolka-See, that is, a non-existent lake in the locality of Wólka near Kętrzyn[107] (of the Bogaczewo Culture, part of the West Balt cultural circle). Furthermore, another two fascinating discoveries were made.

The first one took place in West Balt territories in Czaszkowo near Mrągowo. Artefacts related to warriors' equipment were discovered there. These probably dated to the Roman Period. Regrettably, these finds were deprived of their original context. Among these artefacts there were, i.a. pattern-welded Roman swords, heads of shafted weapons, mail fragments, and enormously lavish parts of horse tack and belts, gold fittings of a sword scabbard or an extremely decorative military emblem in the shape of a vulture. These finds are being processed,[108] but it seems likely that they did not belong to a local community but were captured from invaders from the south, or were obtained in the course of military expeditions in this direction. Pieces of evidence for far-reaching military activity by the Balts are provided by some north European bog sites where Balt weapons were found,[109] by furnishings of Barrow 2 in Suwałki-Szwajcaria recording extensive contacts of military elites,[110] as well as by the Crimean necropolis of Čatyr-Dag. At the latter site, apart from Scandinavian and Przeworsk Culture traits, it is also possible to point out Balt finds.[111] All in all, the discoveries of offering sites with weapons to the south of the Baltic do not necessarily mean that their interpretation should be identical to that of Scandinavian sites.

The other discovery was made in a lake in the locality of Lubanowo in western Pomerania (Figs 1.9–1.11), in the territory of a borderland cultural unit known as the Lubusz Group. It is the only site of this kind which is still a lake and not already a bog.[112] This discovery is due to an incident, but also good observation conditions (minimal thickness of sediments in the littoral zone of the water body). This site still requires years of research, but it is already possible to say that it was mainly used in the Early Roman Period to the beginning of the Younger Roman Period (first–second centuries), but without a doubt there are also traces of offerings/gifts that were made in the Middle Ages (e.g. a Viking spearhead) and even modern times (a copper cauldron offered by the turn of seventeenth century)![113] One may mention also other findings, e.g. a logboat dated to the fourth century BC or a private stamp of a Prussian general from the early nineteenth century.[114]

Archaeology certainly has more to say with regard to war-booty sites. Recent years have disproved a number of previous opinions, such as the absence of human sacrifices, the non-existence of such sites to the south of the Baltic, or a several-hundred-year break in making offerings. Every new discovery, as well as answers, brings a number of new questions. This is what makes science so interesting!

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[104] Eliade 1993, 137–39, 148–50; Kaul 1998.

[105] Cf. Godłowski 1988, 33–35.

[106] Kontny 2006, 143–45, 151–52, with further reading.

[107] Raddatz 1993; Kontny 2015a.

[108] Nowakiewicz and Rzeszotarska-Nowakiewicz 2012; 2019; Nowakiewicz 2016a.

[109] Kontny 2019a.

[110] Kontny 2013a.

[111] Kontny 2013b.

[112] Apart from the site of Thorsberg in Schleswig. This site, after years of being a bog, became a shallow astatic water body, which sometimes completely dries out — see Blankenfeldt and others 2014, 45–50.

[113] Kontny and others 2016a; 2016b; Kontny 2016a; 2019b; 2021c; 2022; forthcoming a.

[114] Kontny 2021a; 2023b, 116–67 fig. 8.

Figure 1.9. Underwater sacrificial site in Lubanowo (photo Aleksander Kozłowski) .

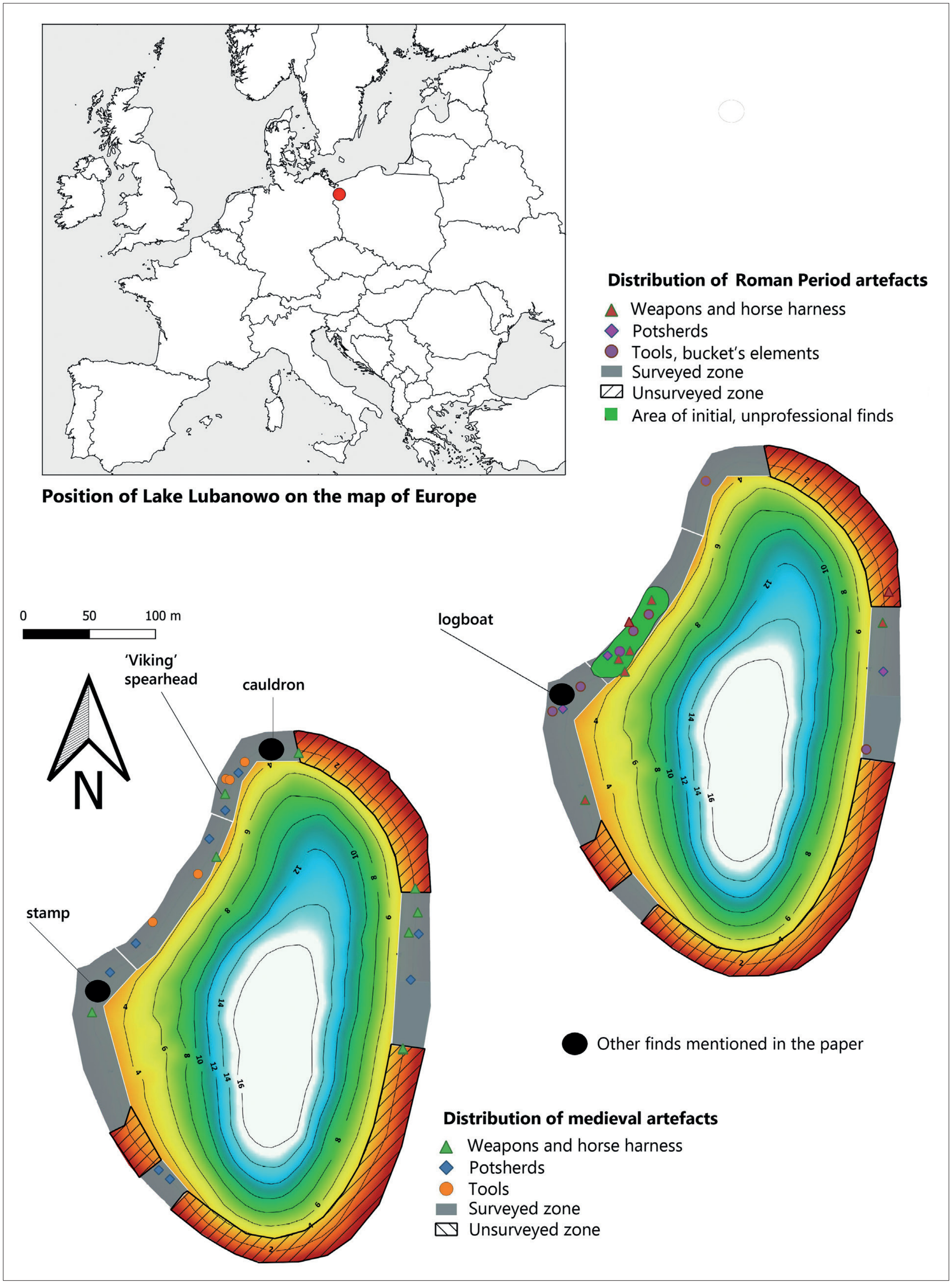
Position of Lake Lubanowo on the map of Europe
Distribution of Roman Period artefacts
Weapons and horse harness
Potsherds
Tools, bucket's elements
Surveyed zone
Unsurveyed zone
Area of initial, unprofessional finds
0
50
100 m
'Viking' spearhead
cauldron
logboat
stamp
N
Other finds mentioned in the paper
Distribution of medieval artefacts
Weapons and horse harness
Potsherds
Tools
Surveyed zone
Unsurveyed zone

Figure 1.10. Location of the Lake Lubanowo, distribution of the Roman Period and medieval artefacts position of the finds mentioned in the paper (drawing Piotr Prejs, concept by Bartosz Kontny).

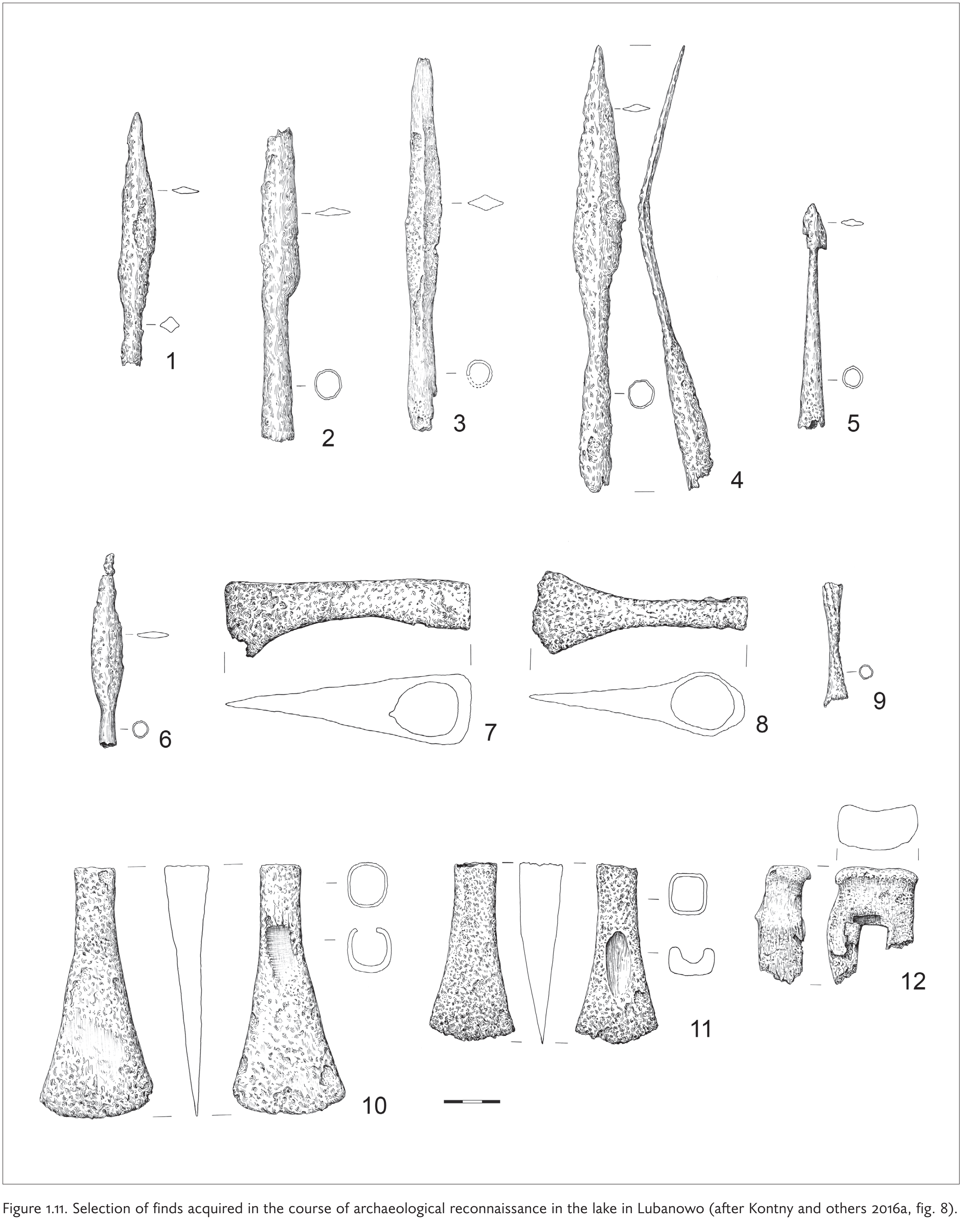

Figure 1.11. Selection of finds acquired in the course of archaeological reconnaissance in the lake in Lubanowo (after Kontny and others 2016a, fig. 8).

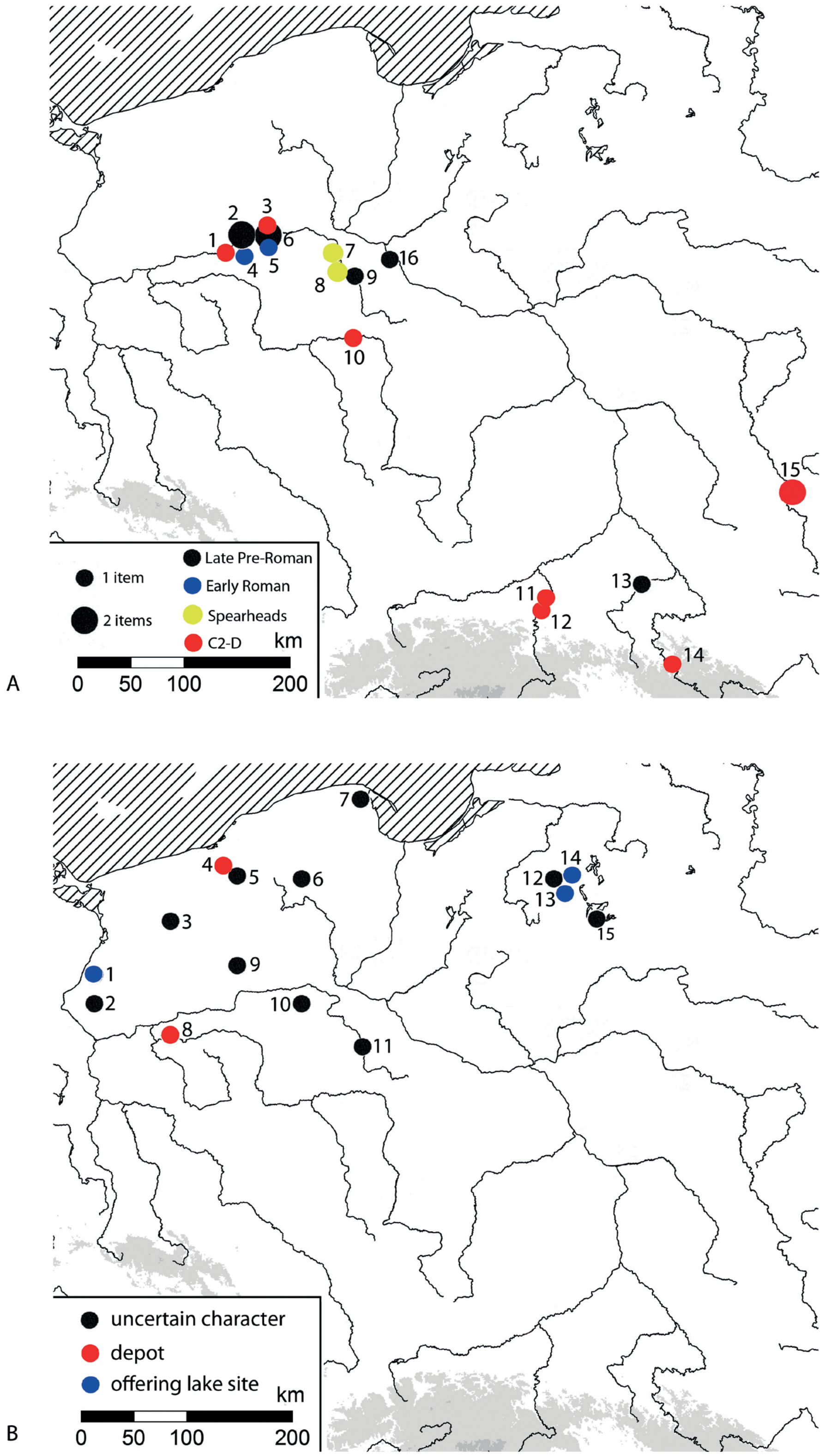
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
1 item
2 items
Late Pre-Roman
Early Roman
Spearheads
C2-D
km
0
50
100
200
B
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
uncertain character
depot
offering lake site
km
0
50
100
200

Figure 2.1. Distribution maps of the proto-historical riverine (A) and lake/bog sites and wetland depots (B) from the territory of Poland. A: 1 — Czarnków, 2 — Nowa Wieś Ujska, 3 — Białośliwie, 4 — Chodzież, 5 — Białośliwie, 6 — Białośliwie, 7 — Pturek, 8 — Pakość, 9 — Inowrocław-Mątwy, 10 — Konin-Kurów, 11 — Ostrów, 12 — Isep, 13 — Rzeszów, 14 — Lake Solińskie, 15 — Gródek. B: 1 — Lubanowo, 2 — Starzyn, 3 — Nętno, 4 — Czarnków, 5 — Dargikowo, 6 — Krępsk, 7 — Żarnowiec, 8 — Stare Dłusko, 9 — Piła, 10 — Żurawia, 11 — Gopło Lake, 12 — Legińskie Lake, 13 — Czaszkowo, 14 — Wólka (after Kontny 2022, fig. 8).

CHAPTER 2

Przeworsk Culture Warriors in the Roman and Early Migration Periods

It is enormously difficult to unequivocally identify archaeological traces of the Vandals' presence. In spite of many reservations, and the fact that such an assumption is inevitably hypothetical, it is assumed that an archaeological manifestation of their presence in central Europe is to be associated with the so-called Przeworsk Culture, or at least its considerable part. The territory linked to this material culture was also inhabited by other tribal groups. Among these, a significant role was played by the Celts, especially in the early phase of the Przeworsk Culture.[1] The Vandilii-Vandals is perhaps another name of the Lugian tribes seen from the north and the west, while the term Lugii, which came from the Celtic god Lug, was related to a southern perspective. The term 'Vandals' replaced the name of the Lugii after the period of the Marcomannic Wars. Perhaps this name replaced also other terms after the fall of the so-called Lugian Federation (Latin *Lugiorum nomen*).[2]

The Przeworsk Culture holds a special place on the cultural map of Barbarian Europe in the Roman Period (Fig. 3.1). Its uniqueness can be seen first of all in some traits of its funeral rites, with special reference to a very frequent habit of depositing weaponry in graves. Weapons were presented as grave gifts throughout the entire period of this culture's existence. On the other hand, there were changes in principles defining the manner of their deposition and the role of weaponry in funeral rites. Thanks to this, archaeologists are provided with an enormously valuable source for learning about not only the manner in which warriors were interred, but also about changes in weaponry and even sets of weapons used in combat. As a result, some of their combat ways can be studied. Bearing in mind the fact that ancient historical written sources describe this part of Europe in a rather insufficient manner, weapons from graves yield invaluable information. So far, no so-called bog sacrificial sites have been discovered in the territories related to the Vandals (see Chapter 1). Such sites are known from Scandinavia (first of all from eastern Jutland), and — thanks to recent discoveries — also from lands occupied by the Balts,[3] the Wielbark Culture,[4] and the so-called Lubusz Group in north-western Poland (Fig. 2.1:B; see facing page).[5] These sites were rather lakes than bogs (raised bogs) where weapons were deposited from the Pre-Roman Period to the Early Migration Period. These weapons were captured in battles against invaders and were ritually destroyed prior to deposition. Thanks to peculiar environmental conditions conducive to preservation, numerous wooden and bone parts of weapons survived. It is therefore possible to reconstruct weapons' dimensions and appearance in a more comprehensive manner. These pieces of information can be useful to a certain degree in the reconstruction of weaponry of the Przeworsk Culture population.

While such sites are not known from the area of the Przeworsk Culture, we do know riverine finds of weapons from there (Fig. 2.2). They were discovered specifically in the Noteć River, which may be treated as a liminal zone, being — at least partially — an acknowledged border of the culture. Mentions concerning these finds have been collected by Makiewicz[6] and have recently been supplemented and reconsidered by me.[7] An important part of the finds originates from the Late Pre-Roman Period (Fig. 2.3:1–4). These are the Celtic stamped imported swords, sometimes found along with a scabbard. Certain finds from the Noteć should be dated to far later times. These are Early

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[1] Godłowski 1985a, 143; Kolendo 2004, 11–23. An identification of the Przeworsk Culture population with the Vandals is to be considered conventional in this work.

[2] For a comprehensive argument see: Kolendo 2005, 112–18. I believe that the assumptions that were put forward there are fully convincing — cf. Kontny 2016b, 169–70.

[3] Nowakiewicz and Rzeszotarska-Nowakiewicz 2012; Kontny 2015a, 307–31.

[4] Kontny 2006, 101–18.

[5] Kontny and others 2016a, 45–57; Nowakiewicz 2016a.

[6] Makiewicz 1992, 112–18.

[7] Kontny 2022, 90–91, with further reading.

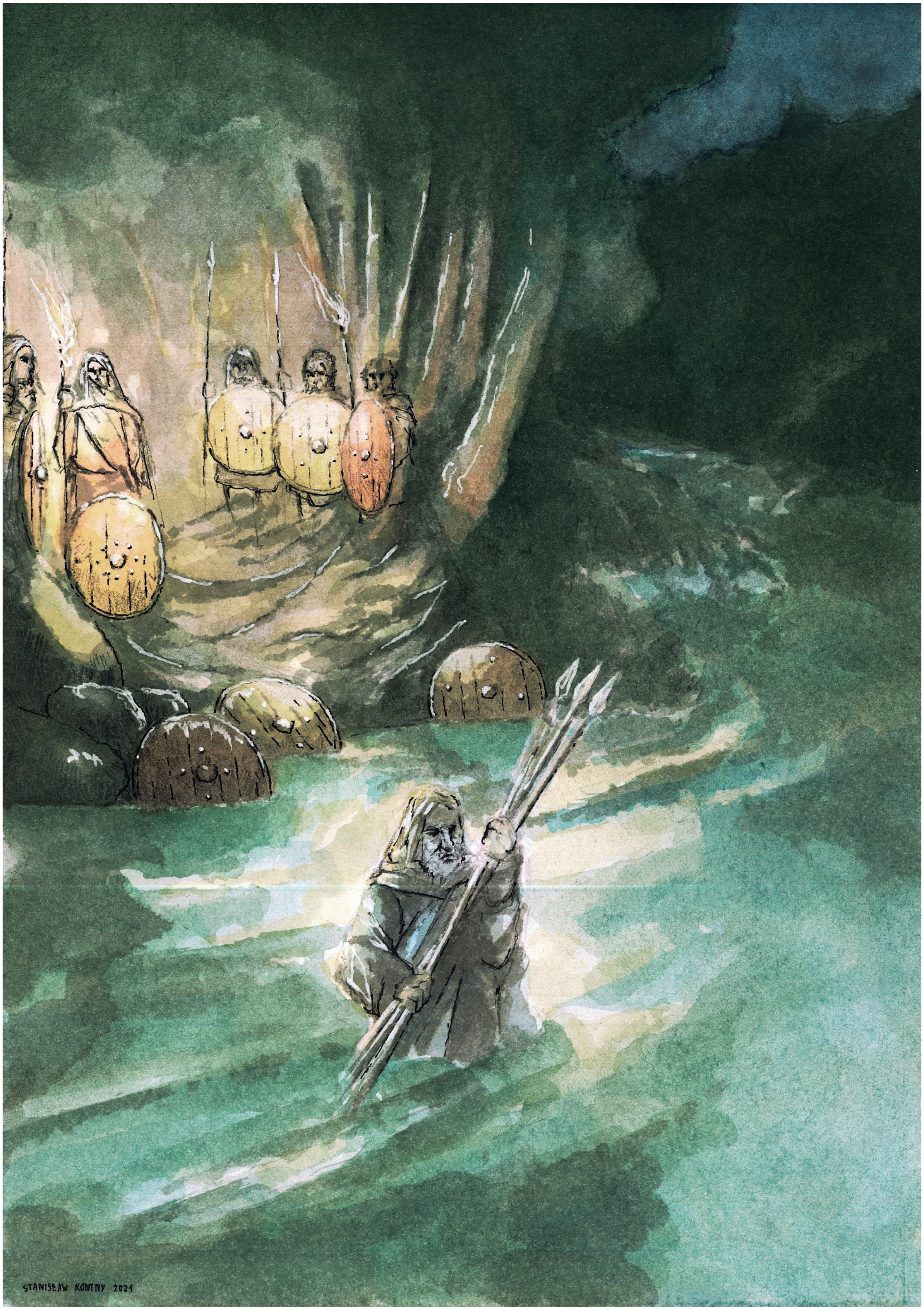
STANISŁAW KONTNY 2021

Figure 2.2. Reconstruction of the weapons offering in a river (drawing Stanisław Kontny, concept by Bartosz Kontny).

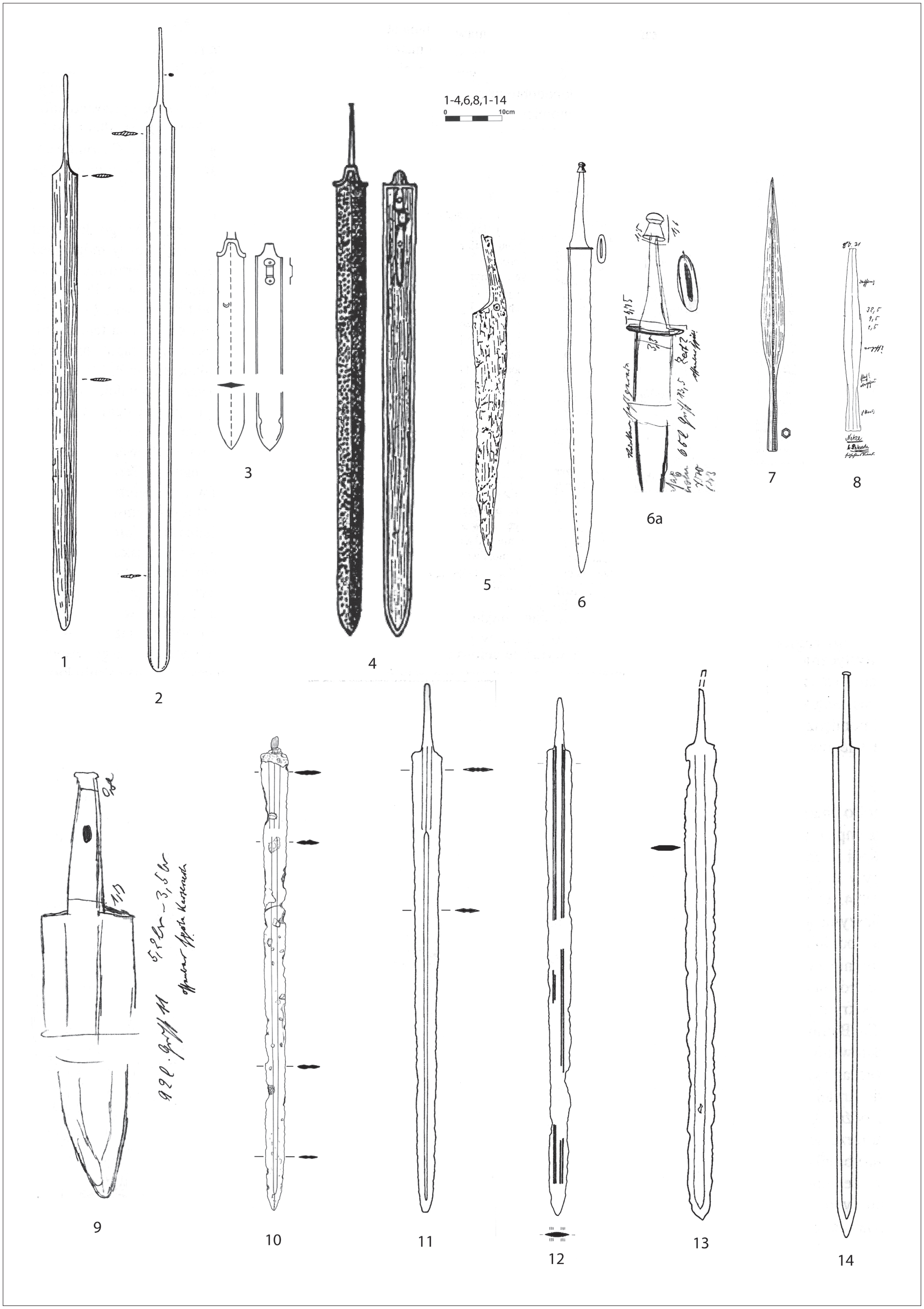
1-4,6,8,1-14
0
10cm
1
2
3
4
5
6
6a
7
8
9
10
11
12
13
14

Figure 2.3. Riverine finds of proto-historic weapons from the territory of Poland. 1–2 — Nowa Wieś Ujska, 3–4 — Białośliwie, 5 — Chodzież, 6 — Białośliwie, 7 — Pturek, 8 — Pakość, 9 — Białośliwie, 10 — Lake Solińskie, 11 — Ostrów, 12 — Isep, 13 — Konin-Kurów, 14 — Czarnków (after Kontny 2022, fig. 7, with further reading).

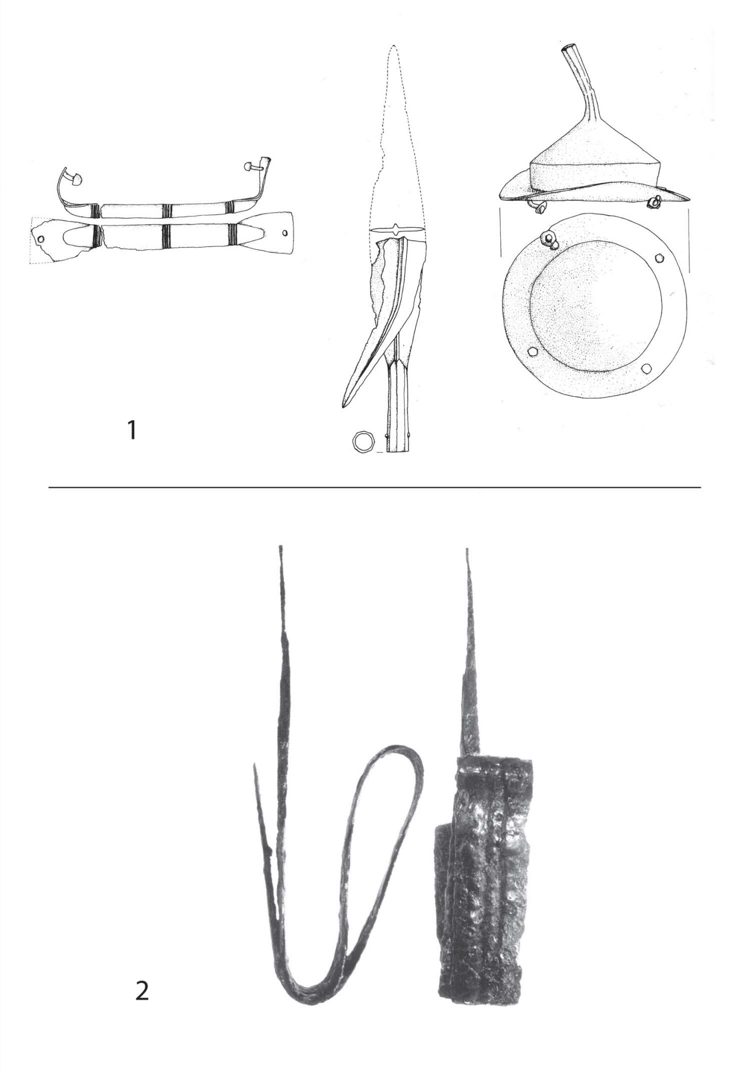

Figure 2.4. Ritually destroyed weapons from Przeworsk Culture burial grounds. 1 — shield parts (shield boss and grip) and a shafted weapon head from the burial ground in Radawa, Jarosław District, 2 — a sword from Łączany, Radom District (after Andrzejowski and others 2004, 19.39, 41, 42; 20.16).

Roman Period single-edged swords (Fig. 2.3:5–6) but also Late Roman–Early Migration Period *spathae* (Fig. 2.3:9–14) and a few Roman Period spearheads (Fig. 2.3:7–8). There are also other rivers in which Roman Period weapons have been found (Fig. 2.1:A). One such is the Warta River, to which the Noteć is a tributary, but they were found in the Vistula River and more to the south as well, that is, in the Dunajec River, Wisłok River, or San River (southern and south-eastern Poland). Numerous finds are dated to the late stage of the Przeworsk Culture. The aforementioned finds have been discovered randomly. They should be treated rather as intentional sacrifices, as it seems improbable that precious swords may have been lost haphazardly. Most of the discussed artefacts are large in size, viz. easy to spot. One cannot exclude that smaller arms have also been thrown into rivers. This phenomenon has clearly Celtic roots, the more so that the earliest riverine finds of swords from the territory of Poland are of Celtic origin.[8] This phenomenon was not limited to the Polish lands, as proven by numerous finds from eastern Germany, specifically Mecklenburg — see, e.g., Migration Period finds from the Warnow River.[9]

Weapons underwent various kinds of treatment before having been deposited into the grave. Among these, it is necessary to mention burning on the funeral pyre together with the earthly remains of the dead and ritual destruction. The latter perhaps took place after weapons had been removed from the pyre: annealed metal yielded to strokes more easily (Fig. 2.4).[10] Destruction, which was probably intended to 'kill' weapons which accompanied the dead, was a habit that was taken from the Celts in the Late Pre-Roman Period but it was practised much earlier in the Early Iron Age Aegean as well.[11] Swords and spears were often of magical origin in Germanic beliefs. Such weapons were supposed to have been made by mythical smiths (Wayland), and heroes often received them from supernatural powers. The weapon (especially the sword) not only symbolized the position of a warrior, but also expressed his personality. It was often anthropomorphized and was believed to have a soul and will. As a consequence, it underwent the same treatment that was applied to the body of a dead warrior (destruction in fire).

Weapons were also subject to additional physical transformation that led to their separation from the world of the living and rebirth in the other world, so that they could serve the warrior.[12] Varied (and sometimes very refined) methods were used for this purpose, such as bending spearheads and swords, rolling them up in a spiral-like manner, squeezing sockets and blades, cutting or crushing shield bosses, etc. Although such practices are an intriguing manifestation of a cult they render the reconstruction of the past weaponry's appearance very difficult. The negative impact of burning weapons on the pyre cannot be omitted, either. What was deposited into graves were weapon remains with no organic parts (spear and javelin shafts, sword hilts, shield planks), often with no inlaid ornaments. On the other hand, it was due to the influence of fire that iron became covered with a reddish patina, which was a good protection against corrosion. Some finds of weaponry which are covered with such patina occasionally do not require conservation treatment.

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[8] Kontny 2022, 91.

[9] Schmidt 2021.

[10] Biborski 2000, 50.

[11] Lloyd 2015.

[12] Rustoiu and Berecki 2015, 137–38. Less convincing are the explanations of weaponry destruction for practical reasons, such as adjusting them to the size of the grave pit or robbery prevention by means of demonstrating the uselessness of such weapons in the course of the funeral ceremony, cf. Măndescu 2012, 347.

This list of factors rendering the reconstruction of weaponry difficult can be completed with ritual activities related to the selection of weapons that were placed on the funeral pyre or deposited into the grave. Regrettably, such practices are hardly identifiable to archaeologists. Yet another factor which diminishes the amount of data concerning weaponry are grave robberies, which often took place already in Antiquity. Other factors include the decomposition and corrosion processes of artefacts deposited in the ground, as well as destruction by humans (e.g. ploughing) or by forces of nature.[13]

In spite of all these limitations, it is still possible to reconstruct the 'Vandal' weaponry. This is first of all due to the fact that weapons which were put into graves were artefacts that were actually used, and not their symbolic or deficient substitutes. This is demonstrated by numerous traces of repairs (Fig. 2.5) which can be observed especially frequently on shield fittings: broken-off shield boss apices were sometimes attached again with the use of rivets. Broken or weakened parts of shield bosses or grips were joined in a similar manner. Traces of repair were also found on swords (shortening of a broken blade or repairing of a damaged hilt), spurs (riveting or soldering of broken heel bands), or spearheads (shortening of a damaged blade). These were attempts to restore the previous glory of weapons, so the possibility of their use in fighting should be taken into account. On the other hand, traces of combat are much more difficult to identify, as it is extremely difficult to distinguish them from the results of ritual destruction to which weaponry was subject in the course of funeral rites. Nevertheless, some deformations can be considered the results of damage in combat. Examples include a shield boss from Nasławice, Wrocław District and a similar artefact from Wrocław-Bieńkowice:[14] both were provided with sharp spikes that became twisted in a spiral-like manner as a result of a perpendicular stroke (against the shield of an adversary?) (Fig. 2.6).[15]

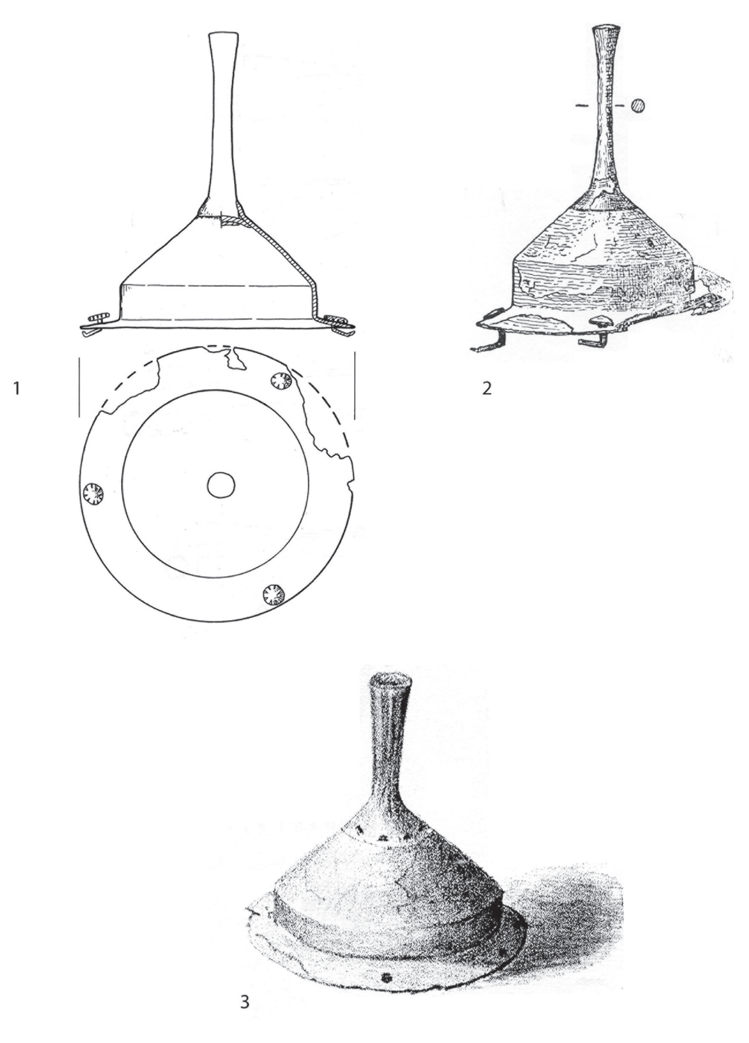

Figure 2.5. Traces of repair of shield boss spikes from the territory of the Przeworsk Culture. 1 — Inowrocław-Szymborze, Inowrocław District, stray find, 2 — Pięczkowo, Środa Wielkopolska District, grave?, 3 — Sulmierzyce, Krotoszyn District, grave (after Czarnecka and Kontny 2009a, fig. 4).

The most numerous group of weapons known from graves are heads of shafted weapons. These were parts of spears that were used for delivering thrusts in close combat, javelins that were thrown from a longer distance, or universal shafted weapons that could have been used in either way. The latter seem to correspond to *frameae*, discussed by the Roman historian Publius Cornelius Tacitus in the late first century AD in his famous work *De origine et situ Germanorum*. The Germanics used *frameae* either in close combat or as ranged weapons, depending on circumstances (Figs 2.7–2.9).[16]

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[13] Kontny 2008a, 107–08.

[14] Jahn 1916, 173, 179, 182; Jahn's heritage; collection of the City Museum of Wrocław — Archaeological Museum, inv. no MAW/III/463 (942:92).

[15] Kontny 2001a, 118–20 figs 2–3; for a more extensive discussion on possibilities of distinguishing between traces of combat and results of intentional ritual destruction cf. Czarnecka and Kontny 2009a, 29–40.

[16] Tacitus, *Germania*, VI.

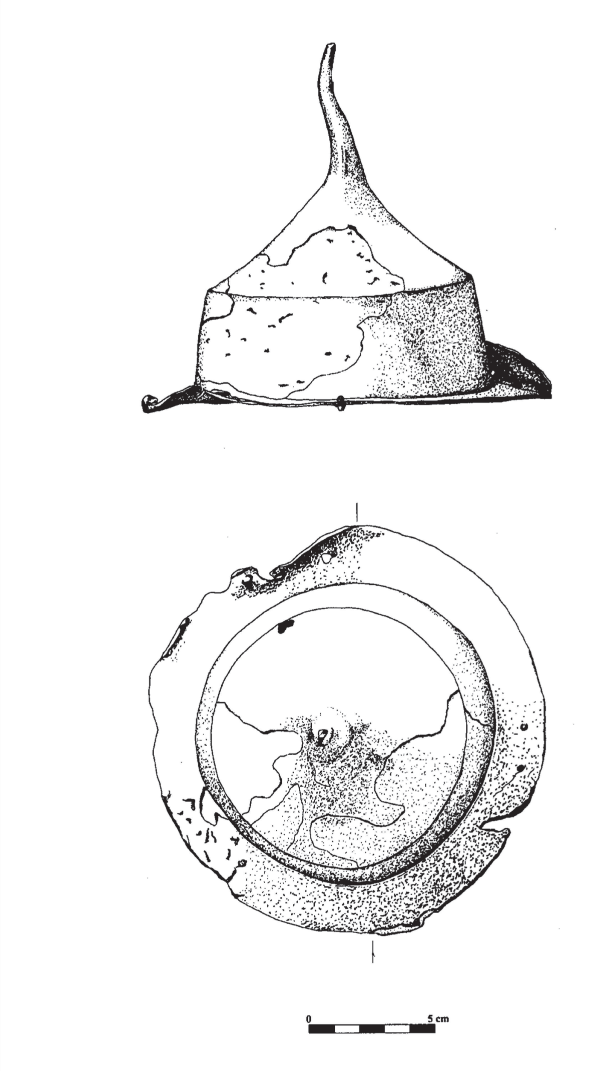

Figure 2.6. Possible trace of combat (spike deformation) on the shield boss from Nasławice, Wrocław District (after Kontny 2001a, fig. 2).

Forms of shafted weapon heads varied.[17] Artefacts with barbs were frequent in the Early Roman Period. These were initially short and ornamented with ring-like bulges on their sockets. In the course of time, their sockets became elongated and often polygonal. Such heads were parts of javelins. Due to the presence of barbs, it was impossible to rapidly withdraw the weapon after it had penetrated the body or the shield of an adversary. As a result, such weapons could usually be used only once in the course of combat. As fighting at close quarters would not have been effective, these weapons were used for attacking the adversary from a distance. The use of javelins is also evidenced by the grave finds: pairs of shafted weapon heads with no barbs. Provided that these formed a set used in combat, one of these weapons must have been thrown in the initial phase of a fight, as it would have been impossible to simultaneously use a pair of shafted weapons.

Heads of shafted weapons from the beginning of the Early Roman Period were often provided with well-pronounced ribs. Their sockets were circular in cross-section and their length was rather short in proportion to the dimensions of the entire head. Later on (Phase B2) heads with much longer sockets were manufactured, the length of which was close to or even exceeded the length of the blade. Such sockets were often polygonally faceted. In this period it is possible to observe the highest degree of standardization of shafted weapon heads, which can still be seen in the beginning of the Younger Roman Period.[18]

Pairs of shafted weapon heads are abundantly found as early as the beginning of the Early Roman Period, after significantly increasing in popularity since the late part of the Late Pre-Roman Period. Although in the early phase of the Roman Period such finds principally include pairs of artefacts that were identical or only slightly different with regard to their dimensions, by the end of the Early Roman Period (Subphase B2b) there is a preponderance of pairs that strongly vary in size. This is perhaps a piece of evidence for their different function: larger heads were parts of spears and smaller ones are of javelins. Pairs of similar shafted weapon heads that were previously in use may have been parts of *frameae* mentioned by Tacitus. At the beginning of the Younger Roman Period, shafted weapon heads with barbs ceased to be manufactured. However, javelins were still in use, although to a limited degree. From Phase C2 onward, only individual shafted weapon heads are encountered in graves. Compared with earlier forms they are usually shorter (a dozen or so are up to slightly more than 20 cm) but sturdier, often with very high sharp ribs or thick rhombic blades. This change may have been related to the use of different combat ways: javelins were abandoned and weapons with greater penetration power were used. These were able to inflict wounds on adversaries protected with armour.[19]

Some shafted weapon heads were provided with ornaments (Fig. 2.10). In the Early Roman Period, a motif of short vertical lines that covered the surface of the blade was popular. This was a so-called stitch pattern that originated as early as the Late Pre-Roman Period. On the other hand, in the Younger Roman Period dashes can be found within arched fields adjacent to midribs. These dashes were sometimes made using punches with arched terminals or, in some cases, were arranged in a

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[17] Kaczanowski 1995.

[18] Kontny 2005, 215–32.

[19] Kontny 2008a, 110–17.

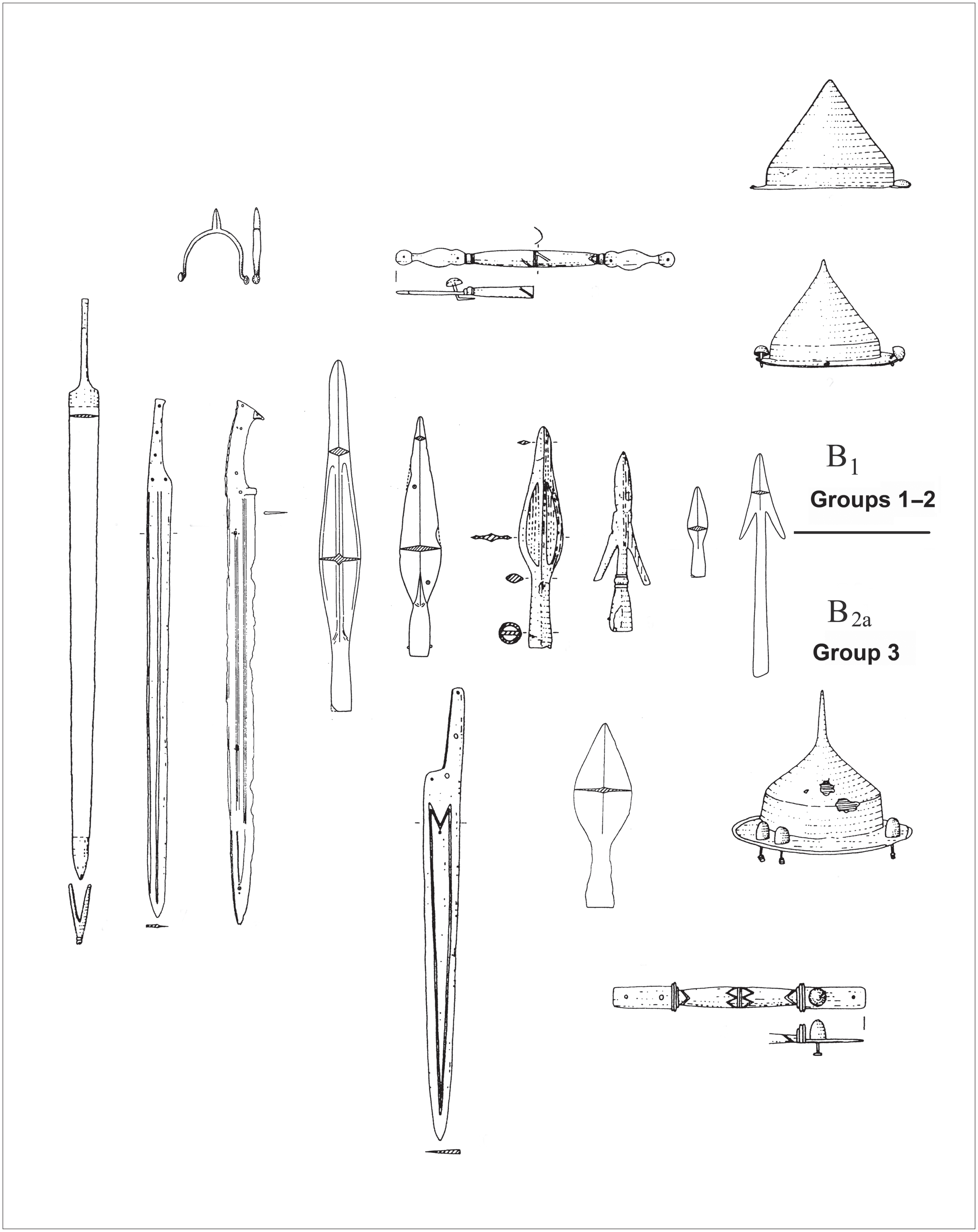

Figure 2.7. Groups 1–3 of graves with weaponry in the Przeworsk Culture according to K. Godłowski together with the main forms of artefacts (after Kontny 2004a, fig. 2).

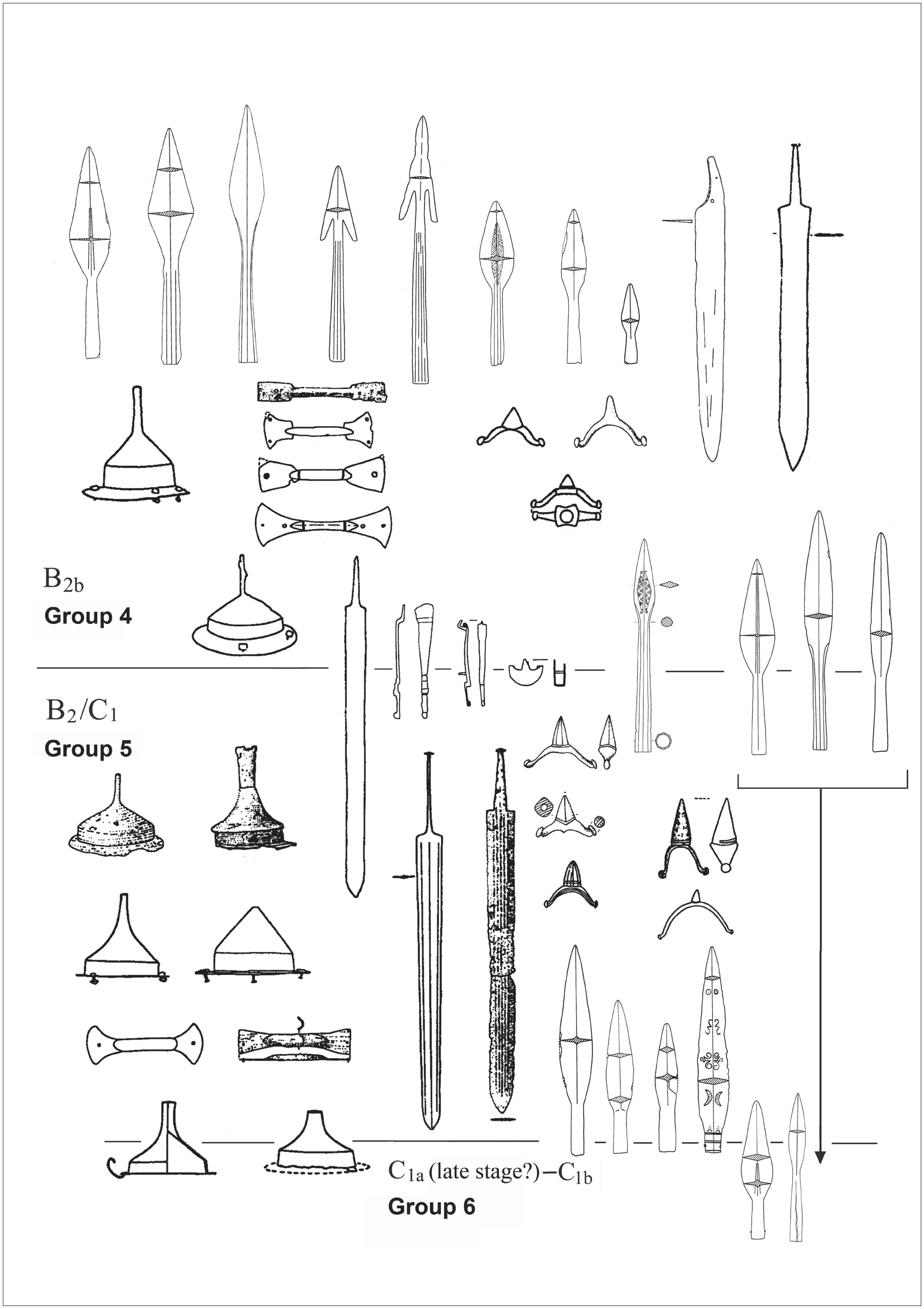
B2b
Group 4
B2/C1
Group 5
C1a (late stage?)–C1b
Group 6

Figure 2.8. Groups 4–5 of graves with weaponry in the Przeworsk Culture according to K. Godłowski together with the main forms of artefacts (after Kontny 2004a, fig. 3).

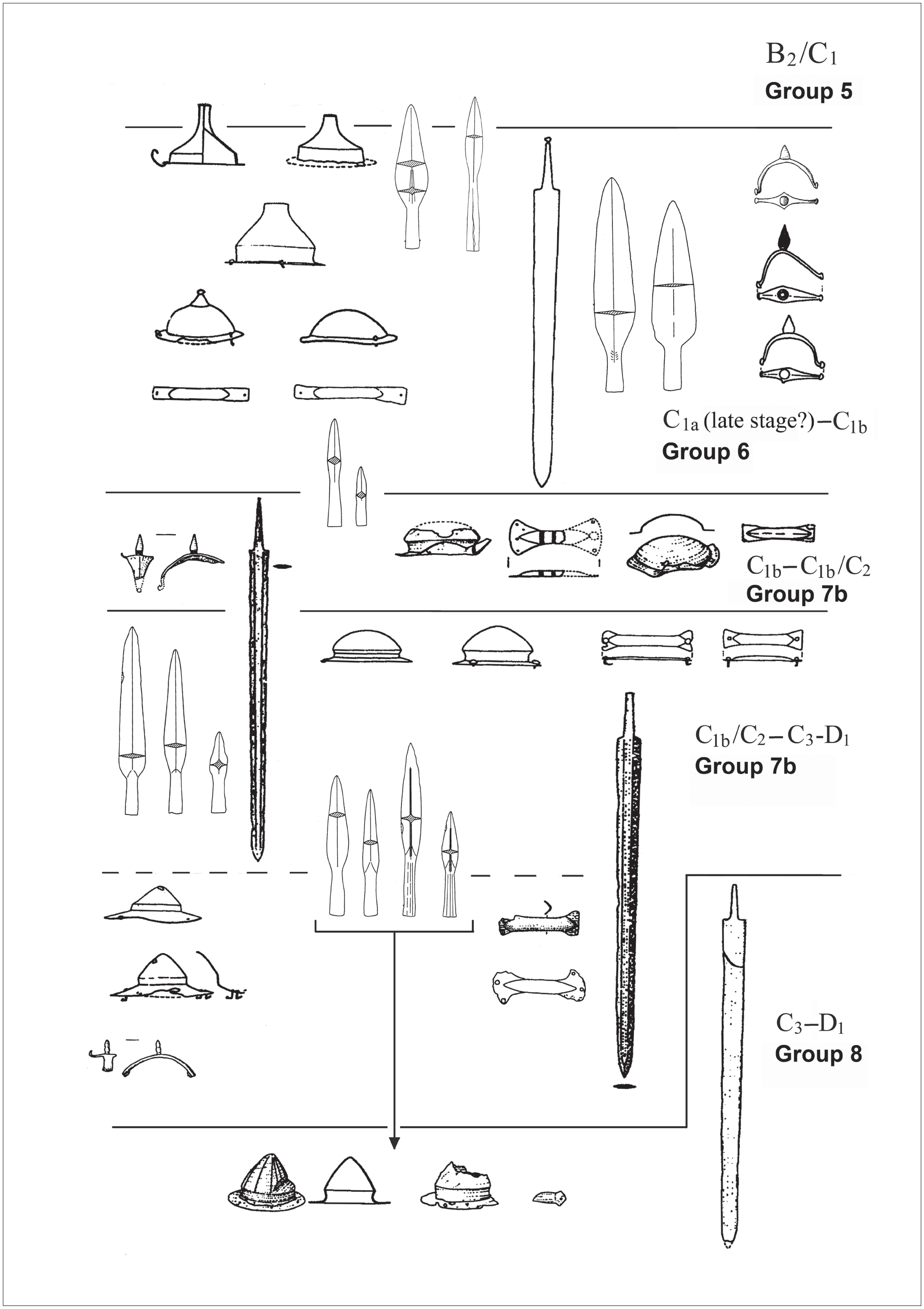
B_2/C_1
Group 5
C_{1a} (late stage?)–C_{1b}
Group 6
C_{1b}–C_{1b}/C_2
Group 7b
C_{1b}/C_2–C_3-D_1
Group 7b
C_3–D_1
Group 8

Figure 2.9. Groups 6–8 of graves with weaponry in the Przeworsk Culture according to K. Godłowski together with the main forms of artefacts (after Kontny 2004a, fig. 4).

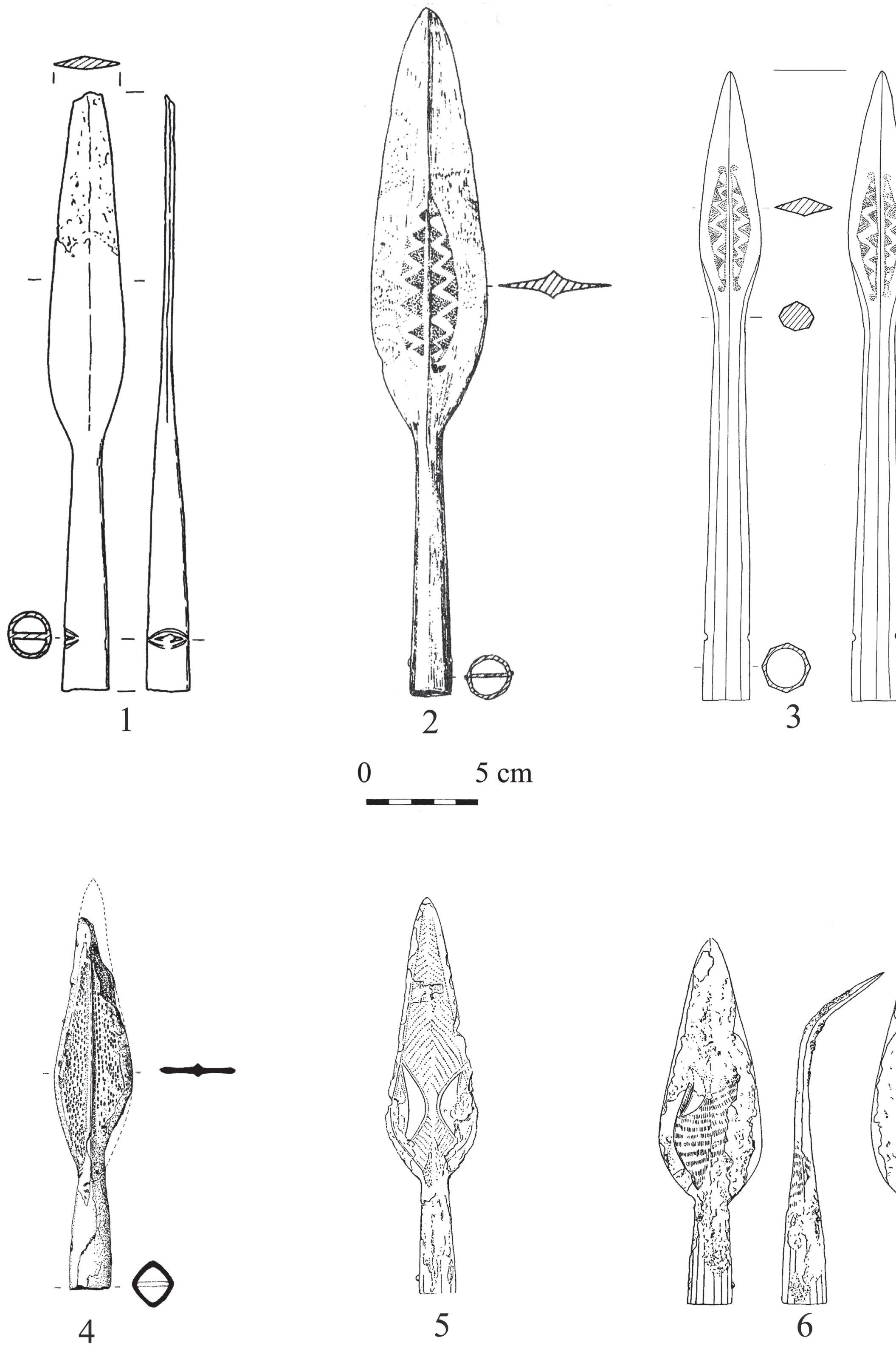

Figure 2.10. Examples of ornamented shafted weapon heads. 1 — Inowrocław-Szymborze, Inowrocław District, stray find, 2 — Garwolin, Garwolin District, Grave 57, 3 — Niemirów, Siemiatycze District, Grave 1, 4 — Grudynia Mała, Kędzierzyn-Koźle District, Grave 2, 5 — Silesia, unknown locality, 6 — Rogów Opolski, Krapkowice District (after Kontny 2004a, fig. 5, with further reading).

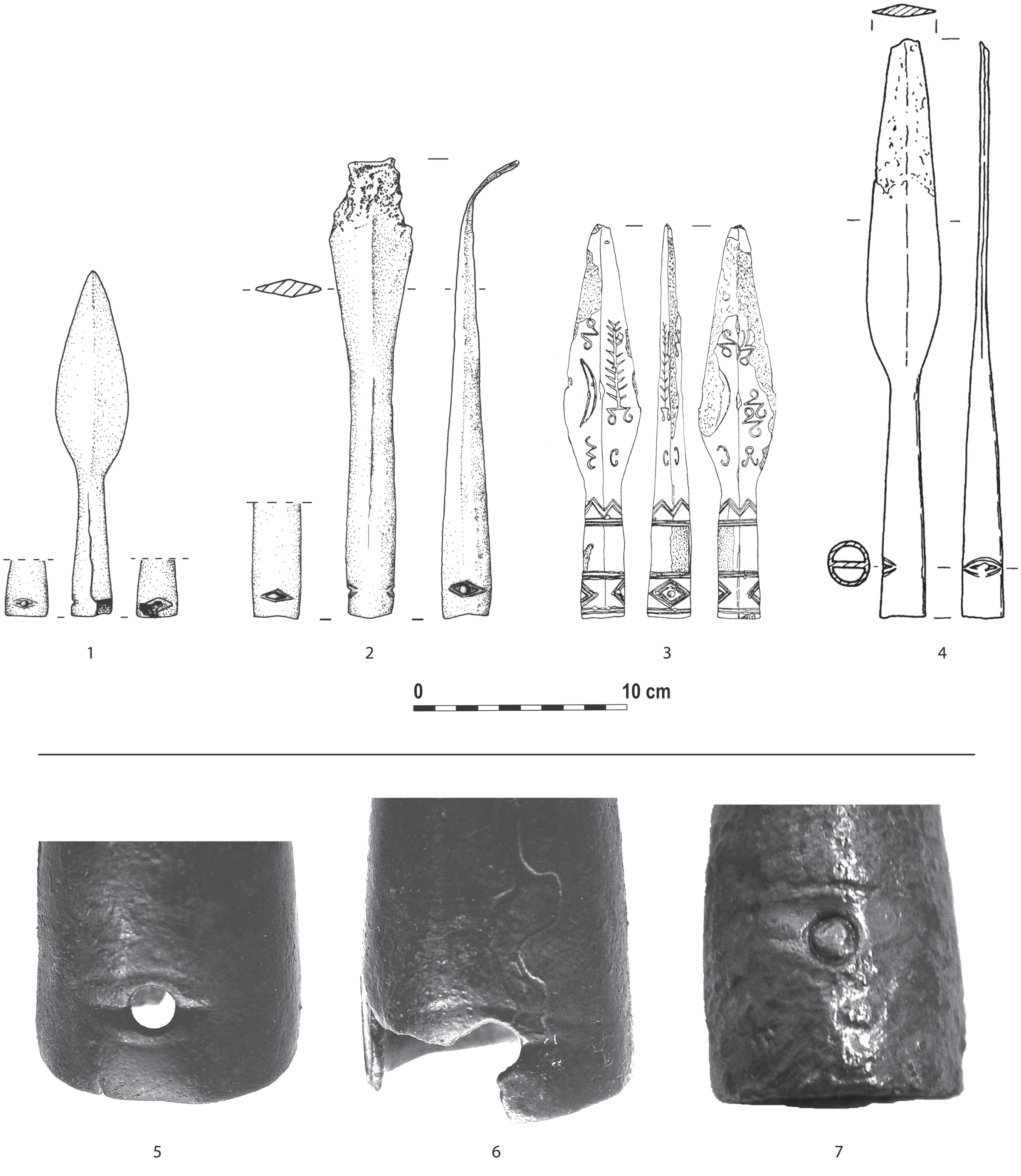

Figure 2.11. Examples of shafted weapon heads ornamented with the eye motif on their sockets. 1, 5–6 — Wesółki, Kalisz District, Grave 66, 2 — Gać, Przeworsk District, stray find, 3 — Zadowice, Kalisz District, stray find, 4 — Inowrocław-Szymborze, Inowrocław District, stray find, 7 — Kamieńczyk, Wyszków District, Grave 123; 5–7 — not to scale (after Czarnecka and Kontny 2009b, fig. 3, with further reading).

herringbone pattern or a motif of horizontal parallel lines.[20] In the developed part of Phase B, arched fields were placed in the central part of the blade. These fields were decorated with a punched pattern of adjacent triangular fields, located on both sides of the rib.

This pattern is testified to as early as the beginning of the Younger Roman Period and was mentioned as an example of a possible influence from the Wielbark Culture, which was generally identified with the Goths. Such a pattern is known from clay vessels in this culture.[21] On the other hand, it is not known whether it also occurred on weapons, as Wielbark Culture funeral rites excluded the deposition of weaponry into graves. At present, this idea can be rejected due to the fact that this motif appears on shafted weapon heads earlier than on pottery. What is more, variations of this pattern can be distinguished, including triangular and zigzag motifs, as well as their combinations and multiplications. In some cases it is possible to register tear-shaped terminals of the pattern, which may suggest that we are dealing with an image of a dragon or a snake.[22] In the Younger Roman Period there are also pole weapon heads whose blades are ornamented with patterns of engraved lines, sometimes crescent-shaped (e.g. Rogów Opolski, Krapkowice District; Silesia, unknown locality).[23]

Alternatively, sockets were sometimes decorated with a unique pattern marked by a pair of arches, or a rhombic outline resembling a pictogram of the human eye (Fig. 2.11). It was placed around the opening for the rivet that fastened the socket to the shaft. Its origin may be related to purely technical procedures — the socket was notched in order to obtain a firm position of the punch's end while the rivet opening was made. In the case of thicker socket walls, it was necessary to notch it on both sides. Such notches clearly resembled the outline of the eye. On the other hand, patterns which are 'sketched' with a burin or a file, sometimes even inlaid (Zadowice, Kalisz District),[24] are undoubtedly a result of the intentional placement of the shape of an eye. Its pupil was the head of the rivet or nail that fastened the socket on the shaft.[25] This may have been an apotropaic procedure, that is, protection against the 'evil eye'. Dangerous or even lethal eyes are known from Greek mythology (Medusa) or Celtic beliefs (Balor, the king of the Fomorians and a deity of death, whose sight was deadly).

The symbolism of an eye may originate from Celtic traditions, but there is more evidence to assume its Germanic roots. Thus, this symbol may be related to the person of Odin/Wotan, the god of war and the other world. This deity sacrificed his own eye in order to acquire wisdom and knowledge of supernatural things and it was the spear that was his divine attribute. Placing the eye motif in such a location is therefore fully comprehensible and may stand for an act of summoning Odin. Medieval Scandinavian sources provide numerous pieces of information on symbolic sacrifices of hostile troops to Odin/Wotan before the battle. This was done by means of throwing a spear in their direction or above their heads.[26] The motif of magic accompanying Odin/Wotan and the spear is therefore present again. Does it mean that people of those days believed that the spear with the sign of 'Odin's eye' had an amplified magical power? Or perhaps the eyes of enemies that were 'offered' to Odin were concerned? It is less probable that such a symbol stood for pertinence to a specific class of warriors. All in all: neither the funeral rites nor other grave goods from features where this kind of shafted weapon heads were found notably distinguish the buried individuals.[27]

Both blades and sockets were sometimes provided with ornaments that were silver-inlaid or, in exceptional cases, even gold-inlaid. Such decorations usually had a symbolic significance (Fig. 2.12). What can be found are concentric circles (a solar symbol), signs resembling the letter omega (marks of thunder and lightning), spherical triangles, points, forks, double forks, depictions of fish, as well as more complex patterns.[28] Some signs resemble Sarmatian religious symbols (or possibly magical or property marks), known as tamgas. Some researchers assume that these marks may have been taken from the Sarmatians.[29] It is worth remembering that in the territory of the Przeworsk Culture there have been two discoveries of polearm heads with runic inscriptions: a barbed artefact from Stalowa Wola-Rozwadów, Stalowa Wola District, with a partially preserved and thus incomprehensible …*krlus* inscription, and a leaf-shaped head from Suszyczno, Kamiń Kaširskij Region in Ukraine. It bears an inscription: *tilarids*, i.e. 'heading for the target' or 'target rider' (sure hitter).[30] It is believed that these inscriptions are weapon names.[31]

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[20] Kontny 2008c, 135–69.

[21] Kaczanowski and Zaborowski 1988, 235–36.

[22] Kontny 2017a, 195–202.

[23] Jamka 1938, figs 15:1, 19:1. For the issue of symbolism of depictions on shafted weapon heads see Chapter 1.

[24] Kaszewska 1988, pl. 5:13.

[25] Czarnecka and Kontny 2009b, 696–700.

[26] Poetic Edda, *Voluspa*, 24; *Hervarar saga*, 18; *Eyrbyggja saga*, 44; cf. Słupecki 2003, 124.

[27] Czarnecka and Kontny 2009b, 702–07.

[28] Biborski 1986, 125–29; Kaczanowski 1988, 51–75.

[29] Dobrzańska 1999, 82–83, with further reading.

[30] Krause 1941, 450–64; Śmiszko 1936, pls XIX:2, 5, XX; Düwel 2001.

[31] Stocklund 1986, 87.

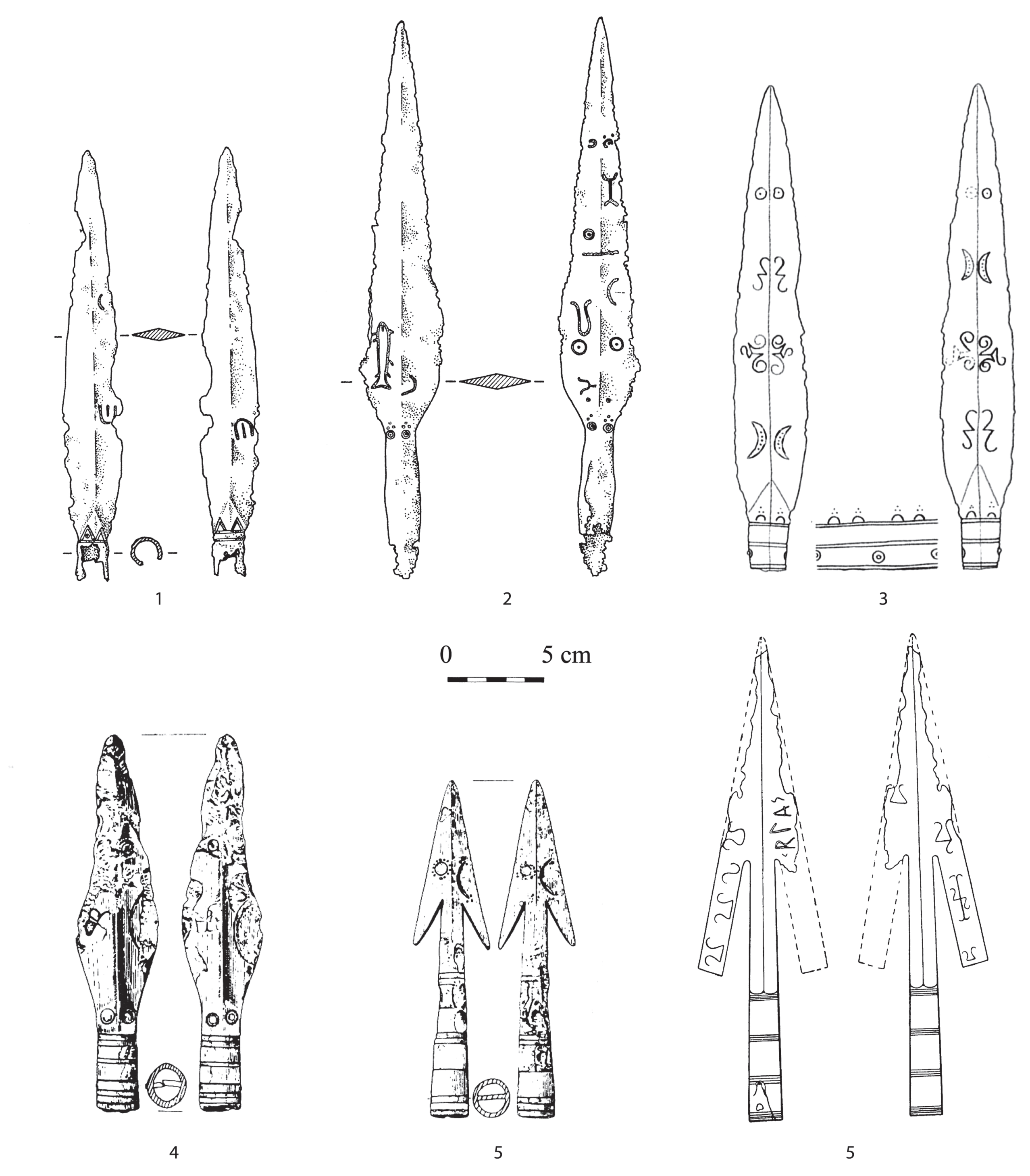

Figure 2.12. Examples of inlaid shafted weapon heads. 1–2 — Gać, Przeworsk District, stray finds, 3 — Stryczowice, Ostrowiec Świętokrzyski District, grave, 4–5 — Sobótka, Łęczyca District, Grave 1, 6 — Stalowa Wola-Rozwadów, Stalowa Wola District, grave (after Kontny 2004a, fig. 7, with further reading).

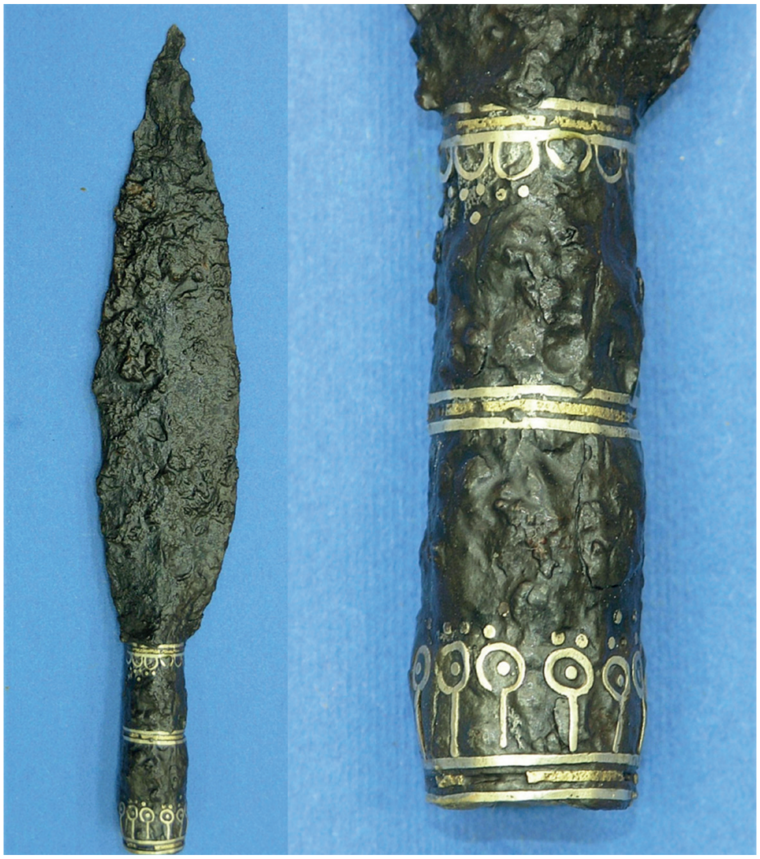

Figure 2.13. Inlaid shafted weapon head from Prusiek, Sanok District, Grave 21 (photo Mateusz Biborski, after Madyda-Legutko and others 2009, fig. 6, reproduced with permission).

Sockets were quite often provided with inlaid motifs of horizontal engraved lines, sometimes accompanied by triangular patterns. One could also mention a shafted weapon head from Grave 21 in Prusiek, Sanok District, Site 25: its socket was provided with inlaid horizontal lines and a pattern of arched festoons, as well as a motif resembling a simplified bird protoma.[32] The latter is known from the Germanic world, with special reference to Scandinavia, and it bore certain symbolic meanings (Fig. 2.13).[33] In the Przeworsk Culture the custom of ornamenting shafted weapon heads with precious metals was in use in the Early Roman Period, especially in its late part, as well as in Subphase C1a.

At present, ornaments are often barely visible, obliterated by corrosion or destroyed by the fire of the funeral pyre. However, at the time of their creation, they lavishly decorated weapons and testified to the qualities of their owners. This is well illustrated by an example of the modern period shafted weapons of African tribes. Heads of such weapons are decorated, often with the use of ornamentation techniques that were similar to the 'Vandal' ones. Patterns on blades and sockets are perfectly legible, even if ornamentation with a different metal was not applied. A sufficient contrast is secured by patina which covers areas that were difficult to polish, as well as by diversified texture, which results in a chiaroscuro effect.

An assumption that shafted weapons were sometimes also decorated with ornaments made from organic materials seems to be confirmed by some openings on sockets with no technological significance, such as perforations which broadened the longitudinal slot in the socket which was not fully forge-welded. Such perforations are known from a few shafted weapon heads from the late Phase B2, both barbed and non-barbed. Their possible function was to hold such ornaments as tassels which crowned bunchuks, pennons, etc. (Fig. 2.14).[34]

A small but intriguing group of shafted weapon heads is known from the late phase of the Przeworsk Culture (Fig. 2.15). The first identified artefact in this assemblage was a find from Radawa, Jarosław District. It was made from a sword blade part which was mounted in a slotted socket and then riveted. It was deemed unique in the first publication which discussed it.[35] However, Katarzyna Czarnecka soon discovered other analogies to such a technological solution. These included artefacts from Cierniówka, Grójec District, and from Tarnówko, Inowrocław District. Other finds came from the nomadic world, such as a Sarmatian burial in the necropolis of Csongrád-Berzsenyi utca, Kom. Csongrád, Grave 4, a late Sarmatian or Hun grave from the site of Pokrovsk, Engel'sskiy Region, as well as Barrow 1 in Lebedevka, Čingirlau Region in Kazakhstan.[36] This list can be completed with an artefact from Grave 448 in Cibilium, which is associated with the Cebelda Culture (Abkhazia). This artefact is probably the earliest in the discussed group. It was made with an identical technology, but in this case not from a sword blade.[37] Yet, there is another find which was made from a sword blade, and the inlet of its socket was provided with a ring similar to that on the artefact from Radawa. This spearhead was recently discovered in the territory of the Belgorodskaya Oblast' in Russia.[38] The aforementioned spearheads do not seem to provide evidence of repairs. They rather express

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[32] Madyda-Legutko and others 2009, 300 fig. 6.

[33] Cf. Chapter 1.

[34] Kontny 2001a, 117–18 figs 2–3; Kontny and Czarnecka 2009b, 707–10 figs 7, 8.

[35] Kokowski 2000, 307 fig. 5.

[36] Czarnecka 2010, 111–14, 116, 120–21 figs 1, 3, 5, 6, with further reading.

[37] Kontny 2013b, 197, 199 fig. 2, with further reading.

[38] Radůš 2014, 236 fig. 3.

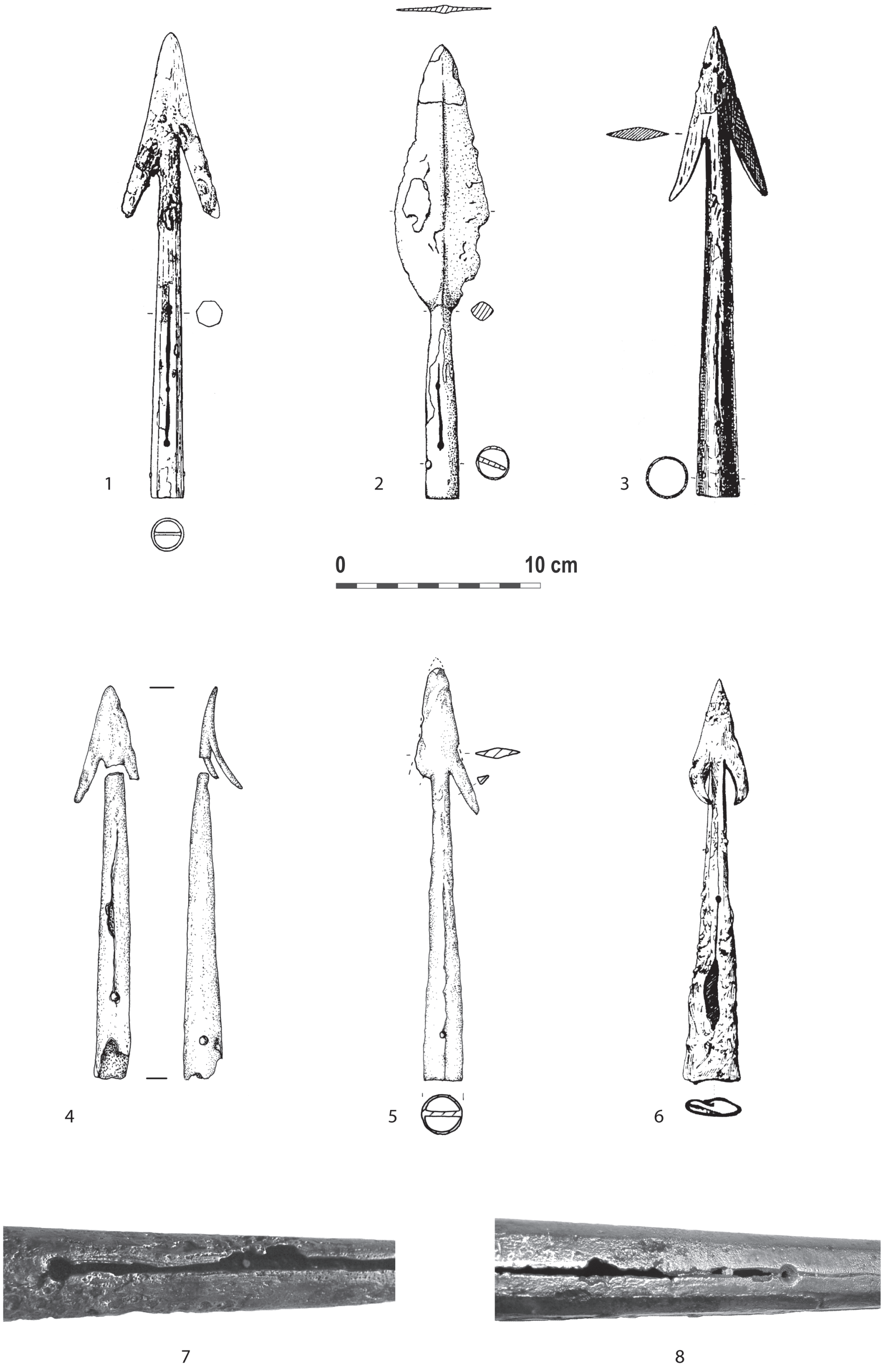

Figure 2.14. Examples of shafted weapon heads with openings in the weld line of the socket. 1 — Górka Stogniowska, Proszowice District, grave, 2 — Wrocław-Osobowice, stray find, 3 — Konin, Konin District, Grave 59, 4, 7 — Nadkole, Węgrów District, Grave 20, 5 — Silesia, unknown locality, stray find, 6 — Kuny, Turek District, Grave 73, 8 — Niecieplin, Garwolin District, Grave XII; 7–8 — not to scale (after Czarnecka and Kontny 2009b, fig. 7, with further reading).

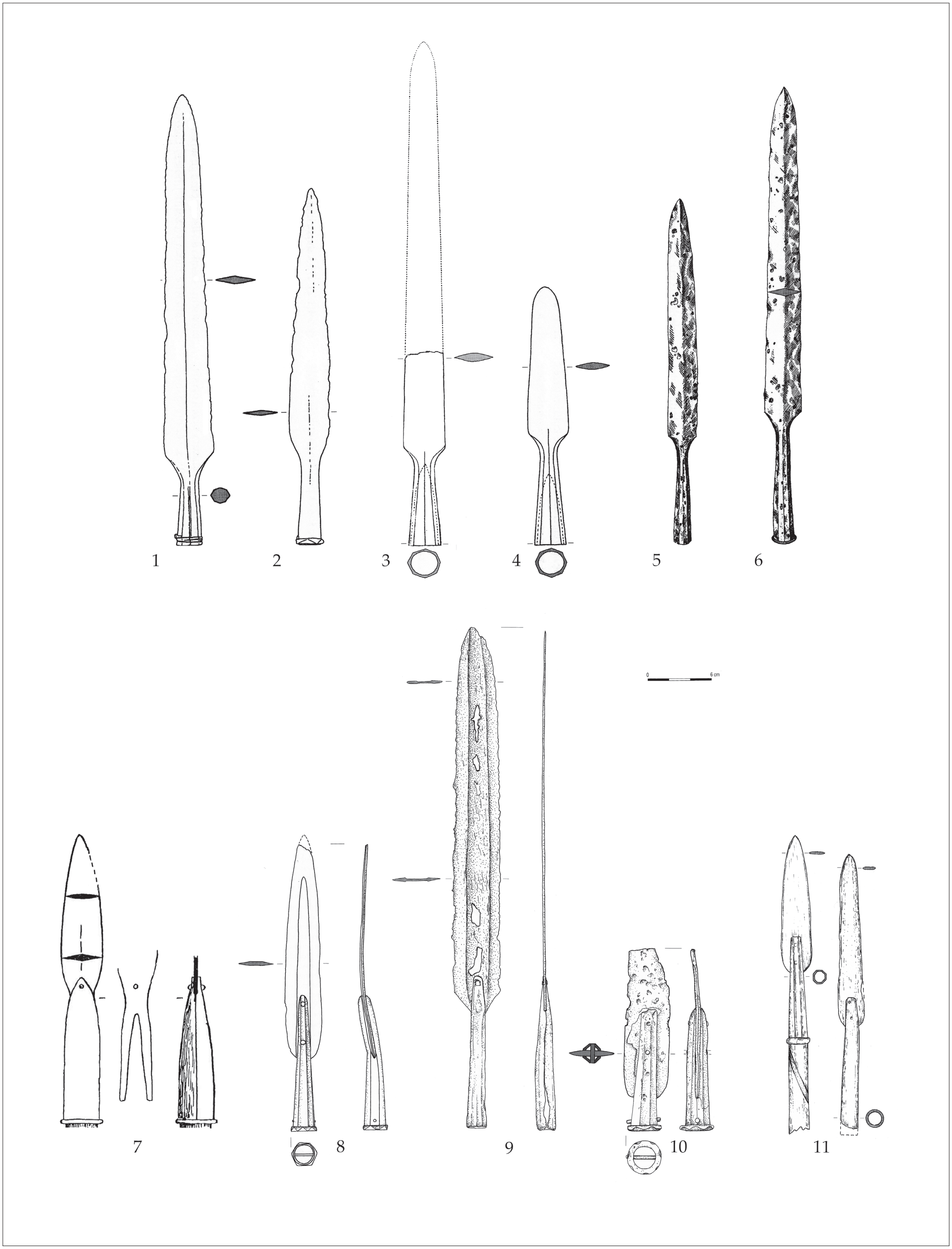

Figure 2.15. Shafted weapon heads with blades riveted to their sockets. 1 – Čatyr-Dah (Crimea, Ukraine), grave 2; 2 – Čatyr-Dah (Crimea, Ukraine), grave 3; 3–4 – Dresden-Dobritz, grave 1; 5–6 – Grigiškės-Neravai (Vilnius, Lithuania), grave 1; 7 – Cibilium 8 (Abkhazia), Grave 448/4; 8 – Radawa, Jarosław District, stray find; 9 – Tarnówko, Inowrocław District, stray find; 10 – Cierniówka, Grójec District, stray find; 11 – Lebedevka, Čingirlau Region (Kazakhstan), Barrow 1 (after Czarnecka 2010; Kontny 2013b).

an intention to make use of the sword blade, perhaps more due to its symbolic than practical value. As the Barbarians provided shafted weapon heads with names, it can be supposed that they had even more respect for valuable swords. Medieval Arthurian legends that demonstrate this phenomenon (such as the Excalibur sword) are, after all, rooted in the Roman Period. Czarnecka remarks that a motif of reforging the broken sword that previously belonged to a hero or a famous ancestor is well known in the Germanic culture: for instance, the Gram sword that was forged for Sigurd from the remains of the sword belonging to his father Sigmund.[39] Moreover, the reforging of a broken precious sword into a spearhead is also mentioned in medieval Icelandic mythology.[40] This is not contradicted by an assumption that an idea of a secondary use of a sword blade came to central Europe in all probability from the nomadic world via the Pontic zone, perhaps in the Early Migration Period.[41] Ammianus Marcellinus reports that the Sarmatians honoured their swords. This can be manifested by an oath on swords made in the course of paying homage to Emperor Constantius.[42] This proves that such weapons held a prominent position in the nomadic world.

Lower fittings of shafts, or spear-butts, were very popular in the Late Pre-Roman Period. However, they occur very rarely in the Roman Period. What is more, some conical artefacts with sharp tops resembling butt caps with their shape were in all probability a special type of javelin head. Due to their conical shape, they had high penetration properties, even against mail armour.[43] Weapons with such traits began to be used on a large scale in the Late Roman Period across a vast area from Scandinavia to the Black Sea (Fig. 2.16).[44]

As no shafts have survived, the dimensions of such weapons are unknown. Solely on the basis of discoveries from areas beyond the Przeworsk Culture (completely preserved shafted weapons from Scandinavian bog sites) and by analysing the alignment of shafted weapon heads in relation to the grave pit and human remains in inhumation graves from other regions of Barbarian Europe, it can be supposed that such weapons were not extremely long: they usually slightly exceeded the height of warriors wielding them, at around 2 m in length. Sometimes they may have been even 3 m long, although this was rather the case with Scandinavian weapons. Javelins were perhaps a bit shorter.[45] Presumably, shafted weapons made entirely of organic materials played only a minor role, if they were used at all. Such weapons were perhaps of some significance in the Late Pre-Roman Period and at the beginning of the Roman Period, as shafted weapon heads made from bone and antler are known from Scandinavia from this time.[46]

Archaeological sources provide an abundance of information concerning shield fittings (Figs 2.7–9). It is known that in the middle of the shield there was a circular opening, in which the shield grip was placed. Shield grips were made of wood, but they were often reinforced with metal fittings that were sometimes ornamented (archaeologists usually use the term shield grips for these fittings). All ethnographic analogies and comparative sources from other periods, as well as a few depictions of the ancient Germans in Roman art, suggest that shields were held in the left hand (perhaps with an exception for left-handed individuals).[47] In order to protect the hand holding the shield, a metal domed top known as a shield boss was attached above the opening. Its role was not only to protect the hand, but also to deliver strokes. The fact that such strokes must have left terrible wounds is demonstrated by the tips of some shield bosses. For instance, in the Early Roman Period, conical shield bosses began to be augmented with spikes. Such apexes were initially small, but soon they became sharp. In later times, spikes became blunt, which can be seen as late as the beginning of the Younger Roman Period. This change in the form was not related to an intention of sparing pain to the adversary. A stroke with a blunt spike to the face, which was the main focus of the attack, was equally painful, but the shield boss could better withstand such an impact. What is more, the blunt spike did not get stuck in the target and thus allowed for rapid, repeated use of the shield.[48] It is therefore not surprising that blunt spikes

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[39] Cf. Czarnecka 2010, 124–25; 2021, 191–93.

[40] See the broken sword named Grásíða (Graysteel) hammered by dwarfs. Blacksmith-sorcerer Thorgrim forged a spearhead of its broken bits. Reshaping did not prevent the curse of the sword from transferring onto the spear and causing further misery — *Gisla saga Súrssonar*, 7; Czarnecka 2021, 192–93.

[41] Czarnecka 2010, 123–24.

[42] Ammianus Marcellinus, *Res gestae*, XVII. 12. 21.

[43] Kontny 1999, 132–33.

[44] Kontny 2013b, 206–07 fig. 5; 2017a, 194–95.

[45] Kontny 2008a, 115–17.

[46] Kontny 1996, 149–54; cf. Martens 2001, 143–47 figs 11–14.

[47] It is generally believed that genetics plays a key role in determining left-handedness, but cultural and environmental factors have an immense impact on this phenomenon. For instance, writing from right to left was popular among the Israelites, but one can also mention the Inuits where the share of left-handed people is large (20 per cent of the population). In some cultures, religious or cultural rules determined 'impure' activities done with the use of the left hand, and 'pure' ones, e.g. in Islamic countries. In such cultures, left-handedness drops to 2–3 per cent, see: Grabowska 1999, 57–61. Anyhow, there are clear advantages which benefited left-handers in hand-to-hand physical combat, as it was always inconvenient for the opponent to cope with a left-handed warrior.

[48] Kontny 2008a, 122, 126.

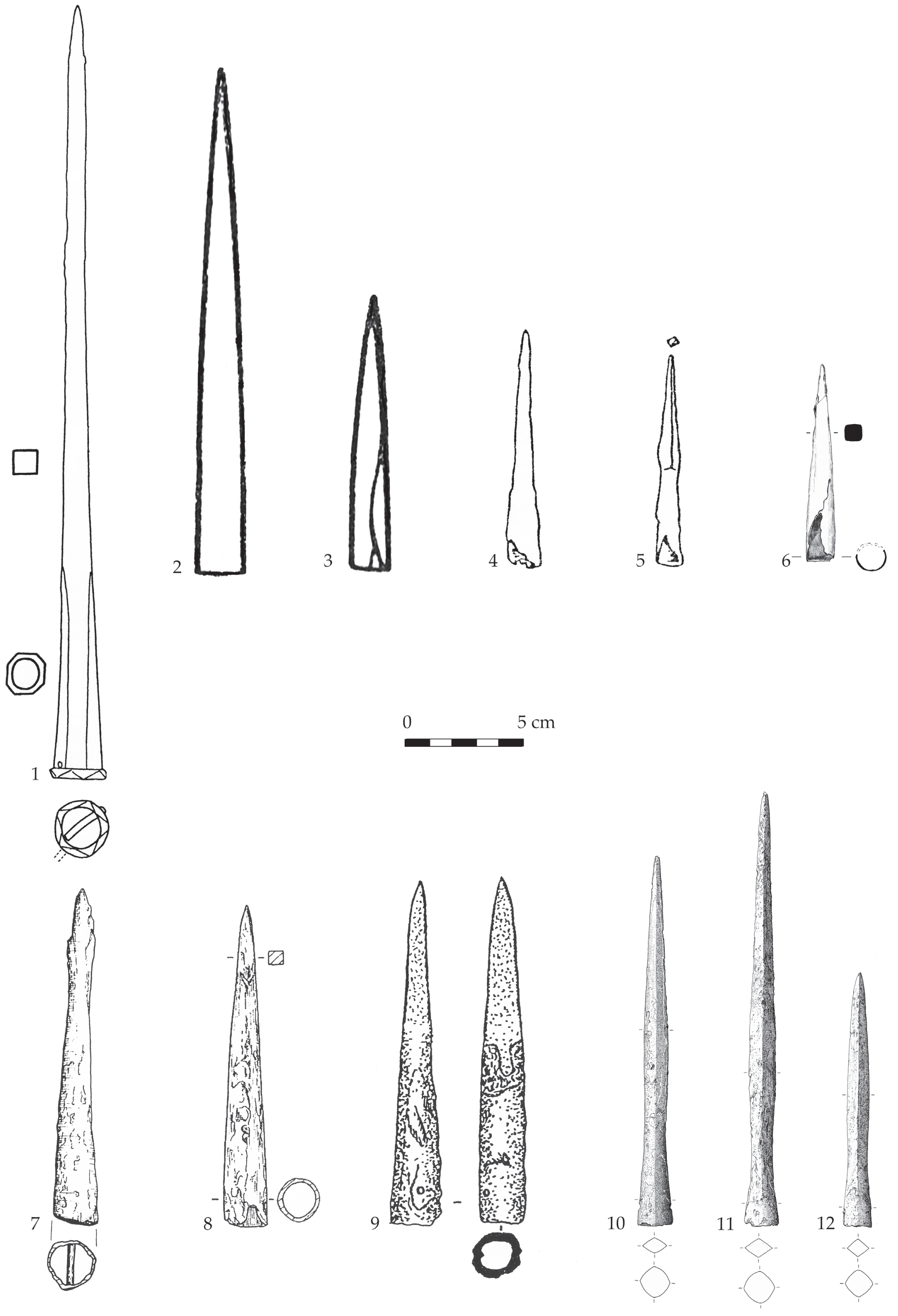

Figure 2.16. Barbarian conical shafted weapon heads from the Roman Period. 1 — Čatyr-Dag (Crimea), Grave 12, 2–3 — Šapka-Monetnyj Holm (Cebelda Culture, Abkhazia), stray finds, 4 — Kobuska Veke (Černâhov/Sîntana de Mureş Culture, Moldova), 5 — Budešty (Černâhov/Sîntana de Mureş Culture, Moldova); 6 — Łabapa, Węgorzewo District, Grave 63 (Bogaczewo Culture), 7 — Kamieńczyk, Wyszków District, Grave 297 (Przeworsk Culture), 8 — Nadkole, Węgrów District, Grave 49 (Przeworsk Culture), 9 — Ardanovo, Iršava Region, stray find (Przeworsk Culture), 10–12 — Illerup, Komm. Skandenborg (bog site), inv. nos VA, YQ, and ZF (after Kontny 2013b, fig. 5, with further reading).

were in use for a long time, i.e. for nearly one and a half centuries. In the Younger Roman Period, various forms of hemispherical shield bosses prevailed. Such a shape was borrowed from the Roman world — analogous forms were used in Roman auxiliary forces. However, further changes in their forms were different from the Roman prototypes. Initially, artefacts provided with a metal knob on top of the cover came into use. It seems that this may have been an attempt at returning to the previous combat style. Although hemispherical shield bosses were perfect for parrying strokes, which simply slid off the ovoid surface, such bosses were much less efficient in offensive combat. An addition of a blunt knob (or a sharp spike in Scandinavia)[49] to the hemispherical shield boss allowed for keeping the offensive combat style while preserving the shape that was modelled on Roman designs. Later on, the lower part of the shield boss became more 'chamfered', and, eventually, their shape started resembling hats with wide brims, protecting a considerable part of the shield's surface. Foreign technological solutions began to be imitated again at the beginning of the Migration Period. These solutions were borrowed from East Roman provinces, and they included domed shield bosses with profiled or fluted surfaces.[50]

Metal parts of shield grips also underwent changes through time. They were initially bar-shaped, with rivet plates that were profiled like a figure-of-eight. As early as the Early Roman Period, such artefacts became gutter-shaped grips with flat rivet plates. In later times these plates became smaller and smaller,[51] and the length of shield grips themselves decreased. This can be explained by the introduction of shields with figure-of-eight shaped openings for grips. Such shields are perfectly recorded in Scandinavia in the Younger Roman Period and in the Late Roman Period. Shield grips were attached to them in a horizontal manner, in the place where the openings narrowed. It is certain that such grips were not fastened with the same rivets as shield bosses, because in this case the grip was covered by the boss for the entire length. In this way, the shield grip was additionally protected from being separated from shield planks as the result of a sword stroke that would hit the rivet whose terminal was located on the exposed part of the plate.

Other shield fittings were used to a very limited degree. Apart from finds from Grave 25 in Kryspinów, Kraków District,[52] so far there have been no discoveries of fittings placed onto the plate of the shield. Such fittings could have been used as reinforcements of weakened shield planks, or as items of repair.[53] What is more often encountered are edge fittings made from gutter-like metal sheets. On the other hand, their frequency is of significance only in a particular period of time (Subphase B2a). Furthermore, such fittings are almost always found in too few fragments to allow for a reliable reconstruction of the shield's shape. This strongly suggests that reinforcements of this kind were in most cases not applied to the entire circumference of the shield. Instead, shield manufacturers focused on parts that were most exposed to strokes. In any case, this solution was not very durable and it can be supposed that its main aim was to fasten the leather which covered the shield. As demonstrated by experiments with Scandinavian shields, such leather coverings greatly increased the shield's mechanical resistance to strokes.[54]

Yet another source can be used for reconstructing shield shapes: shield miniatures (Fig. 2.17) which were used as amulets. Such artefacts are found in women's graves in the Early Roman Period.[55] Only one find is known from a settlement.[56] Their number is not impressive (a few artefacts altogether), but the amount of information they provide is enormous. They precisely render technological details of shield manufacture. It is possible to notice a convexity imitating the shield boss and a riveted metal sheet which stood for the shield grip. Therefore, it is visible that shield grips were usually attached horizontally, while their vertical position was exceptional. A horizontal variant was more comfortable in the case of relatively small offensive shields. Such an arrangement was safer while the shield was used in attack as the dynamic load of the wrist is lower in this position. This is why in combat sports the fist usually reaches the target in a horizontal position.[57]

On the surface of the models there are rows of convexities which usually go along the edges or through the central part of the shield. These were perhaps depictions of ornamental knobs or rivets that fastened the leather layer. However, their presence has not been otherwise confirmed so far in the Przeworsk Culture, although such examples are known from Scandinavia and Crimea.[58] On the basis of these miniatures it can be concluded that Early Roman Period shields were

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[49] Cf. Ilkjær 2001, figs 287, 291.

[50] Cf. Godłowski 1992, figs 1–4; 1994a, fig. 1.

[51] Cf. Godłowski 1992, figs 1–4; 1994a, fig. 1.

[52] Godłowski 1972, 140 fig. 2:c.

[53] Zieling 1989, 247–49.

[54] Kontny 2008b, 190–91.

[55] Andrzejowski 2000, 23–47.

[56] Kontny and Rudnicki 2009, 35–38 figs 3–4.

[57] Kontny and Rudnicki 2009, 38. This position is also favourable in shields that were used in battle arrays, as it facilitates pushing the adversary back, which was one of the basic functions of the shield — Buckland 1978, 260.

[58] Kontny 2008b, 190–91.

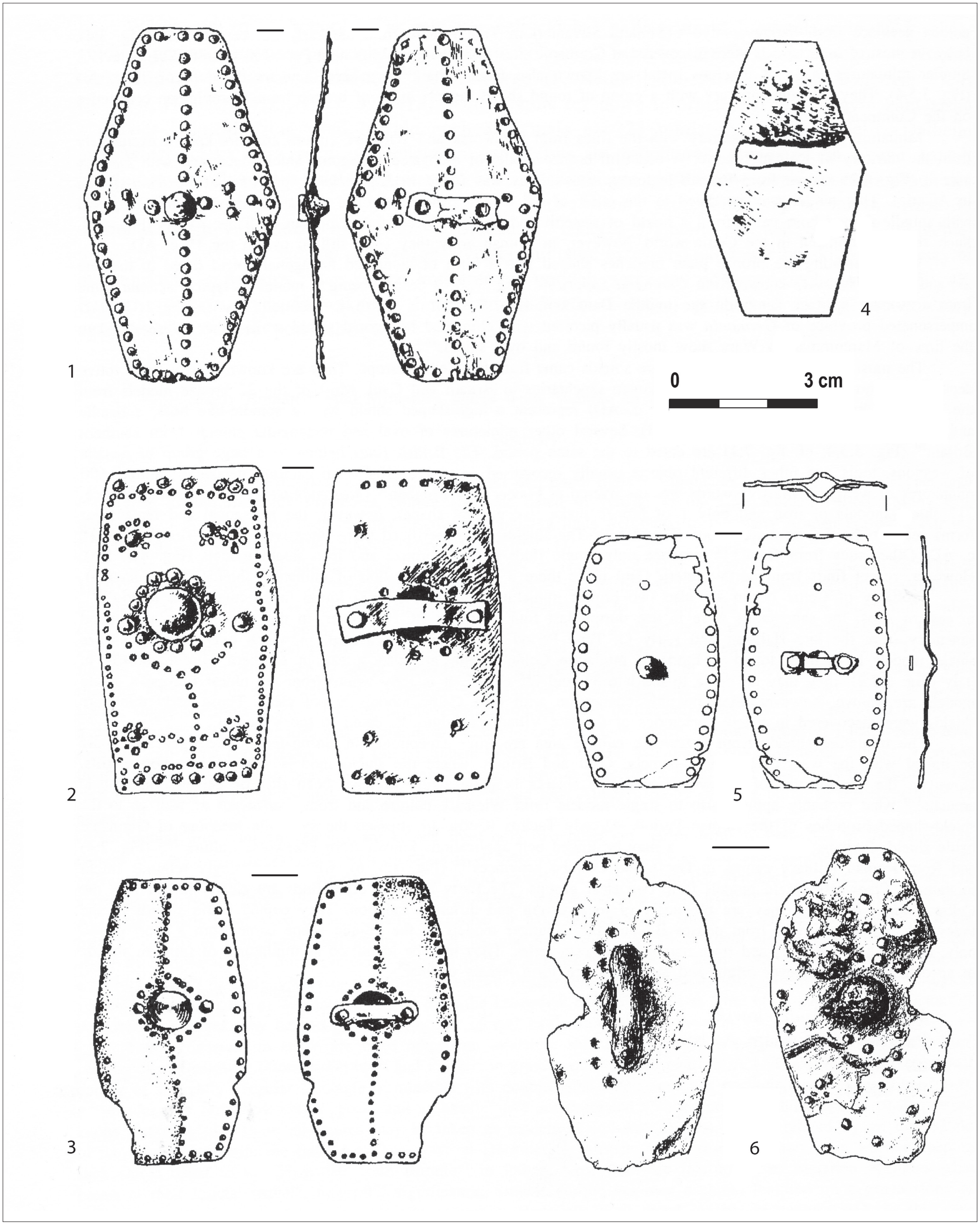

Figure 2.17. Shield miniatures from the territories of the Przeworsk Culture and the Wielbark Culture. 1 — Nadkole, Węgrów District, Grave 141B, 2 — Siemiechów, Łask District, Grave 46, 3 — Siemiechów, Łask District, Grave 39, 4 — Siemianice, Kępno District, Grave 24, 5 — Nowy Targ, Malbork District, Grave 69, 6 — Siemianice, Kępno District, unknown grave; 1–4, 6 — iron, 5 — copper alloy (after Andrzejowski 2000, fig. 2, with further reading).

elongated and rectangular (Siemiechów, Łask District, Grave 40), or their shapes were rectangle-like with arched sides (Siemiechów, Grave 39; Siemianice, Kępno District). What is more, hexagonal shields are also known (Nadkole, Węgrów District, Grave 141B; Siemianice, Grave 24; Pełczyska, Pińczów District, Feature 9/2000).

The dimensions of the actual, real-life shields of this kind were approximately 30–50 × 50–90 cm. Such proportions are confirmed by the images of the Germanic warriors in Roman art (although they also depict round shields, e.g. on the Column of Marcus Aurelius) and by discoveries of completely preserved shield fittings in burials from beyond the territory of the Przeworsk Culture (Scandinavia, the Elbe Circle, the Bogaczewo Culture, the Dollkeim-Kovrovo Culture).[59]

There is a small group of miniature shields dated to Phase B2/C1 with radically different shapes (Mierzyn-Grobla, Piotrków Trybunalski District, Grave 24; Opatów, Kłobuck District, Grave 49; Piaski, Bełchatów District, Grave 95). They have rectangular outlines with double-arched excisions on their longer edges, and they resemble stretched animal hides (Fig. 2.19:2). These artefacts were in all probability miniatures of ceremonial shields that were not used in real combat.[60] Regrettably, there are no reliable sources from the territory of the Przeworsk Culture that would allow for a reconstruction of shields in later periods. It can be supposed that — analogously to Scandinavia, as demonstrated by lake offerings[61] — rounds shields with a diameter of about 1 m were in use. This can be implied by small sizes of shield grips, suggesting the use of narrowed figure-of-eight openings in the plates of shields, that is, similar to those recorded in Scandinavia.

On the other hand, there are examples of straight and obtuse-angled shield edge fittings from the Younger Roman Period in the Przeworsk Culture and in its western neighbour, the Luboszyce Culture. This demonstrates a continuous presence of shields resembling Early Roman Period forms. Furthermore, smaller hexagonal and oval shields are confirmed in Crimea and in the Cebelda Culture at this time.[62] Therefore, it can only be speculated as to what forms of shields were dominant in the Przeworsk Culture in its later phases. How these shield plates were made is not completely clear, either. On the basis of finds from Scandinavian lake offerings, it was proposed that shield plates were composed of many planks (up to about ten). This assumption is in all probability generally true, especially in the case of round shields with a diameter of *c.* 1 m. However, other solutions were certainly possible. Namely, a shield made from one single plank with dimensions of 105.5 × 38.5 cm is known from as early as the beginning of the Early Roman Period. It was found in the Vædebro bog in Jutland.[63]

Some Scandinavian bog finds and depictions suggest that shields made entirely of organic materials with no fittings at all were also in use. Due to the fact that weapons were burnt on the funeral pyre together with the earthly remains of the deceased warrior, such artefacts have not survived until the present. A solution of this kind was in all probability so effective and cheap that not all warriors decided to use metal shield bosses and grips. Such shields were unquestionably very widespread in Barbarian Europe in the Pre-Roman Period. However, one can observe a different tendency in the Roman Period. The share of graves with metal parts of shields steadily increases in the Przeworsk Culture. This seems to suggest that shields entirely made from organic materials were gradually abandoned.[64] On the other hand, they must have still been of some use, which is implied by wooden shield bosses with short and blunt spikes. Such shield bosses were discovered at the Vimose bog site in Funen, and they probably originated in what are presently Polish lands.[65]

The population of the Przeworsk Culture may have painted their shields. There is no archaeological evidence for such procedures in this cultural area, but this habit was testified to in various parts of Germanic Europe.[66] What is more, it was mentioned several times by Tacitus. The painted planks of the adversary's shields are mentioned in a famous speech of the Roman commander Germanicus encouraging legions to fight the Germanics.[67] In another place, while discussing the Germanic people as such, the Roman historian says that they do not care to give their weapons any ornamentation. They solely decorate their shields with various colours.[68] One such description most likely concerns the population of the Przeworsk Culture. Its territory is believed to have been inhabited by the Lugian Federation, which also encompassed the tribe

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[59] Cf. La Baume 1941a; Kontny 2008b, 185–95.

[60] Andrzejowski 2000, 32.

[61] Cf. von Carnap-Bornheim and Ilkjær 1996; Ilkjær 2001, 358–61; Kontny 2008b, 192–93, with further reading.

[62] Kontny 2008b, 193–95 figs 6:d, 7, with further reading.

[63] Ilkjær 2001, 359 fig. 319; Kontny 2008b, 186 fig. 6:c.

[64] Kontny 2008a, 121–22 diagram 12.

[65] Engelhardt 1869, pls 5:4, 9. They belong to forms with blunt spikes and with very short apexes dated to the beginning of the Younger Roman Period. They are probably related to the Balt people who took part in an expedition to the north, together with Przeworsk Culture warriors, cf. Kontny 2017b, 38, 40 fig. 16:1, 8.

[66] von Carnap-Bornheim and Ilkjær 2006, 284.

[67] Tacitus, *Annales*, II. 14.

[68] Tacitus, *Germania*, VI.

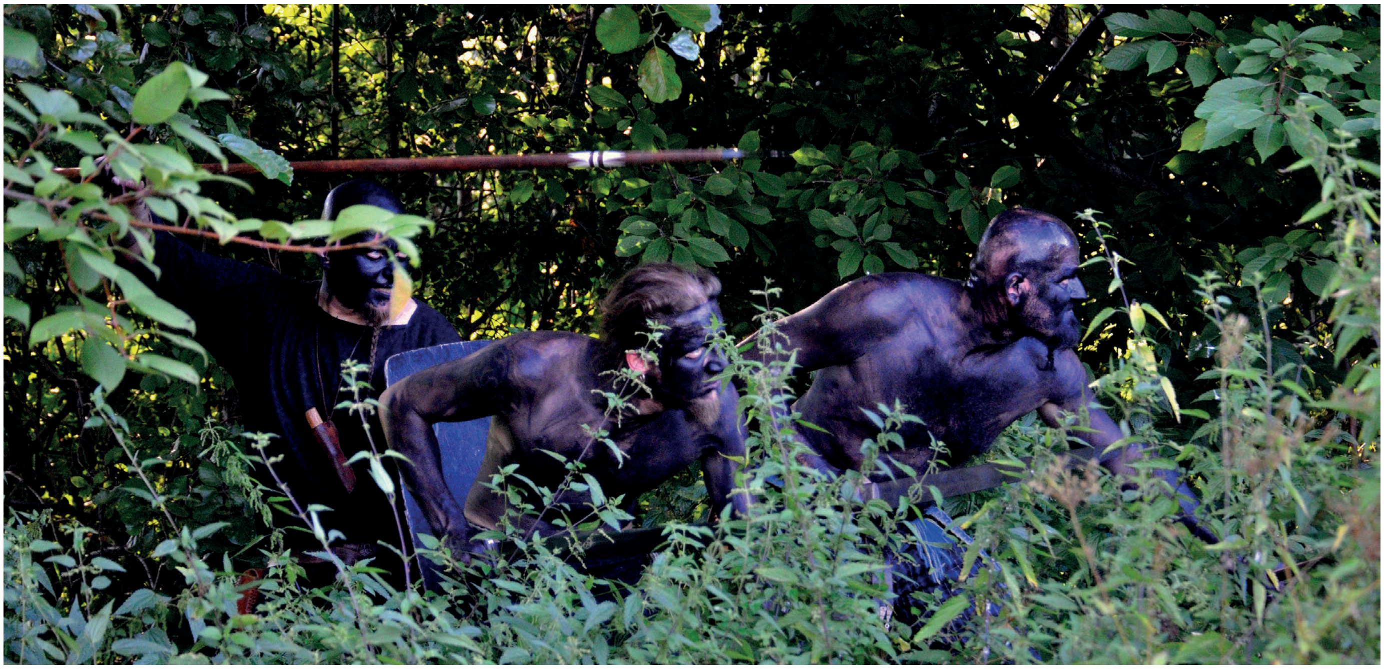

Figure 2.18. Re-enactors painted black, modelled on the description of the Harii by Tacitus; Dymarki Świętokrzyskie (Holy Cross Bloomeries Festival) archaeological festival in Nowa Słupia (photo Wojciech Wasiak, published with permission).

of the Harii. Tacitus says that the shields of the Harii were black and their bodies were painted. They fought during the night and they terrified the opponent with their appearance.[69] This is no doubt a stylistic figure aimed at impressing the reader with a vision of an infernal army that may be interpreted as a Lugian retinue or a *Männerbund*-like association of young males.[70] On the other hand, this narrative confirms the habit of shield painting. Experiments that were carried out in the course of the Holy Cross Bloomeries Festival (Polish: Dymarki Świętokrzyskie) demonstrate that bodies and equipment which are painted black offer excellent camouflage against a green background (forest, meadows, grass), even during the day (Fig. 2.18).[71]

Swords played a particular role in warriors' equipment. There is no question that not everyone could afford one, and not everyone was entitled to take one to the other world. At the beginning of the Early Roman Period, swords can be found in every fourth grave containing weapons, while by the end of this period they only occur in every tenth burial.[72] At this time, swords that were in use varied with regard to their morphology. Initially, there were still double-edged swords which are clearly related to earlier La Tène weapons. It is difficult to determine whether this was some kind of manifestation of faithfulness to craftsmanship tradition, or whether it resulted from swords that were so highly valued and effective, that they were passed down from generation to generation. All in all, the share of such swords is rather insignificant. In this period there is a preponderance of single-edged swords which were rooted in Germanic traditions dating back to the Late Pre-Roman Period. The forms of such swords changed in the course of the Roman Period: their weight increased and their blades became shorter. Single-edged swords were often decorated. Ornaments, most often geometrical, were made with a punch or by means of etching and they were placed on the weapons' forte. Blades were also ornamented with engraved patterns running along the longer axis. Such motifs sometimes resembled an elongated letter M.[73] On the other hand, they can also be interpreted as depictions of giant snakes or dragons running along the entire length of the blade. What is more, this interpretation fits the aforementioned assortment of depictions known from weaponry from Barbarian Europe.

Single-edged swords were gradually abandoned and they were not in use anymore by the Younger Roman Period. Interestingly, the decrease in such swords' importance was not accompanied by an increasing

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[69] Tacitus, *Germania*, XLIII.
[70] Kolendo 2008, 166–69.
[71] Wojciech Wasiak, MA, personal communication, for which I am indebted.
[72] Kontny 2008a, 121 diagram 11.
[73] Biborski 1978, 133–34.

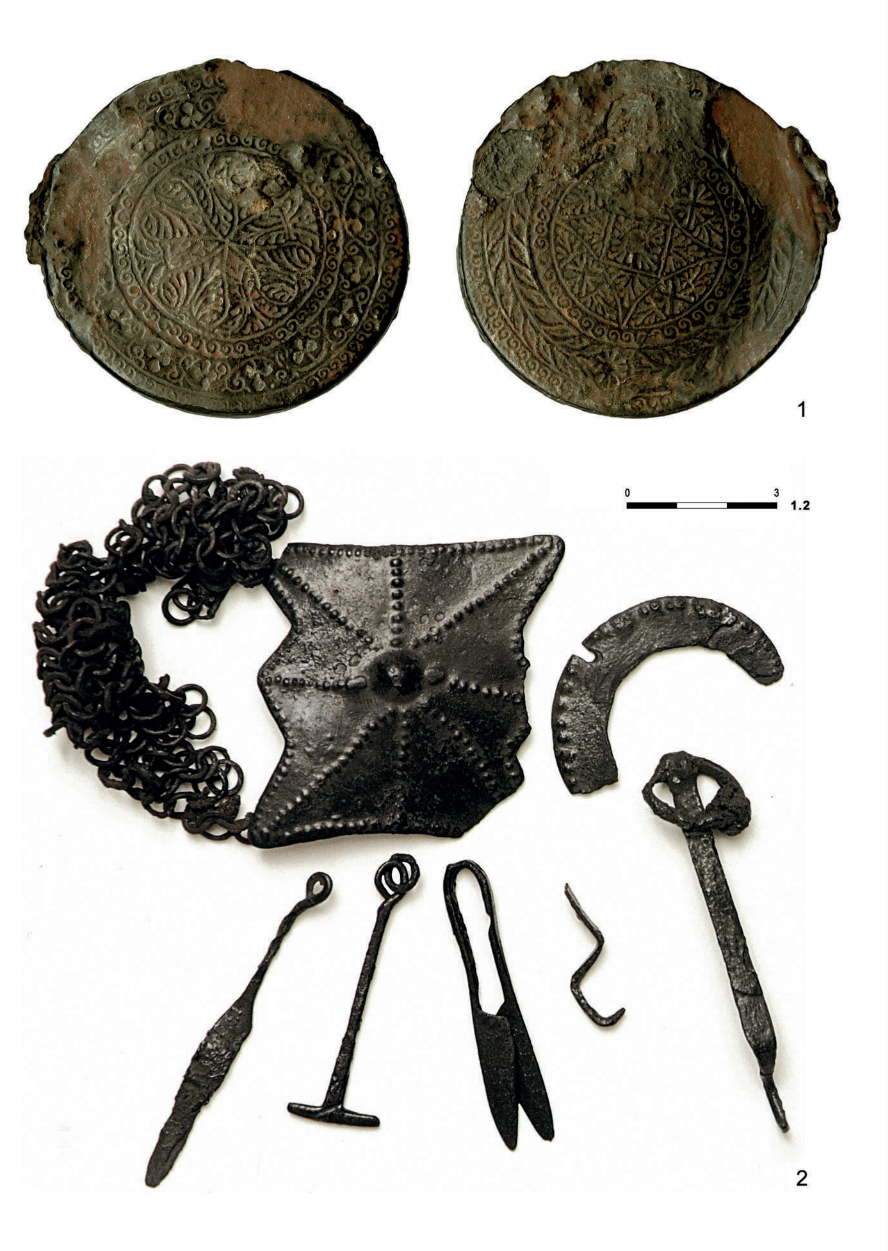

Figure 2.19. Amulets from the Przeworsk Culture necropolis in Opatów, Kłobuck District. 1 — pendant made from the Roman box-shaped chape, Grave 1186; 2 — amulet made from mail fragment and miniatures of tools and a shield, Grave 49 (after Madyda-Legutko and others 2011, pl. CDLVII).

role of double-edged blades. This can be explained with changes in combat style, and a temporal preference for using a pair of shafted weapons (a spear and javelin) in warfare.[74] New forms of double-edged swords differed from their La Tène prototypes. They occur as early as the beginning of the Roman Period and are directly related to Roman variants. Among these weapons there are even imports from the territory of the Empire, just to mention a Roman cavalry sword (*spatha*) from Grave 20 in Wesółki, Kalisz District. This sword is dated as early as the end of the Late Pre-Roman Period. It was provided with a die-made inscription ALLIVS PA, which refers to the manufacturer of the weapon.[75] Over a fairly short time span, relatively long and narrow double-edged swords were replaced by those with shorter and wider blades and well-pronounced sharp points. Such weapons are to be related to the short swords of the Roman infantry, the so-called *gladii*. Some finds from the territory of the Przeworsk Culture were local imitations, while others actually came there from the Empire. As late as the end of the Early Roman Period longer swords were deposited into graves. These were an indirect link between short swords and long weapons of Roman *spatha*-type, which were characteristic of the Younger Roman Period. The latter were 80–90 cm long and are believed to have been mounted combat weapons. On the other hand, there is no doubt that they were also used by Vandal foot warriors. At the end of the Roman Period and the beginning of the Migration Period the length of swords became even greater, although this increase was not very considerable. In this time, apart from broad and heavy swords that were ideal for chopping strokes, there were also the ones whose blades are faceted or provided with fullers. Such blades taper toward the point, which facilitated piercing the adversary through, possibly even if they were protected by mail armour (Figs 2.7–9).[76]

Many swords were imported from the territory of the Roman Empire. Their identification is not an easy task. Some Roman swords clearly stood out with regard to their shapes, e.g. swords with ring pommels.[77] However, these were not particularly popular in the Przeworsk Culture. So far, only two of this kind are known from its territory. These were found in Grave

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[74] Kontny 2008a, diagrams 2, 11.

[75] Dąbrowski and Kolendo 1967, 390–95.

[76] Cf. Biborski 1978, 90–94; Godłowski 1992, 84.

[77] Biborski 1994a, 85–97.

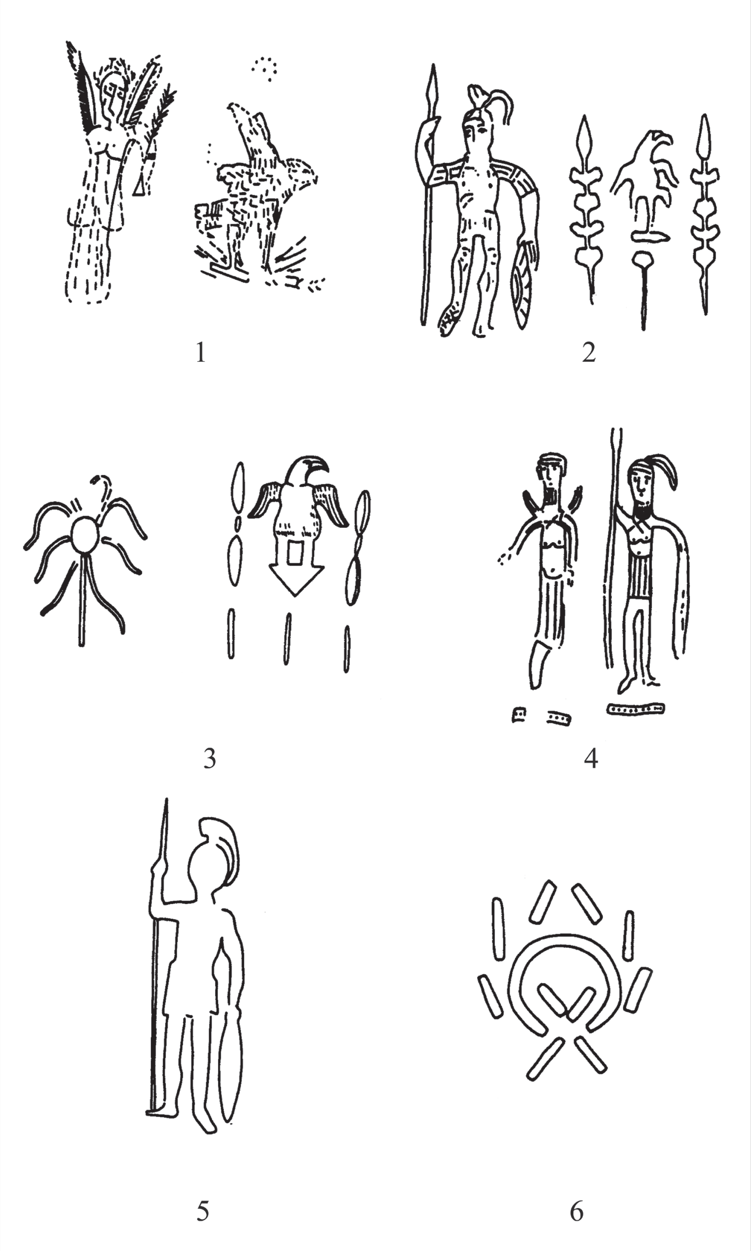

Figure 2.20. Examples of inlays on swords in the Przeworsk Culture. 1 — Rzeczyca Długa, Stalowa Wola District, stray find, 2 — Hromówka, Chmel'nyc'kyj Region (Ukraine), grave, 3 — Piaski, Bełchatów District, Grave 171, 4 — Podlodów, Tomaszów Lubelski District, grave, 5 — Oblin, Garwolin District, Grave 45b, 6 — Biała, Zgierz District, Grave 2 (after Kontny 2004a, fig. 9, with further reading).

106 in Krupice, Siemiatycze District and in Ostrów, Przemyśl District, Grave 50.[78] Traits that are considered clear evidence of the swords' Roman origin include die-made inscriptions (Fig. 2.27:A.1).[79] Their traces were in many cases very effectively obliterated by corrosion and conservation; only after many years in museum storage and showcases were such inscriptions recognized, and it thus became possible to determine their provenance. Even greater difficulties can be found in the identification of writings made with the *punctim* technique (an inscription is formed by rows of points punched with a proper tool in the metal surface (Fig. 2.27:B.4)). Such inscriptions are considered signatures of Roman owners of weapons. On the other hand, they are not always the owner's full names, in some cases being merely enigmatic signs.

The presence of such weapons demonstrates that they fell into Barbarian hands in the form of war booty, as it is hard to assume that the Romans would freely give away their private high-quality weapons.[80] Many Roman swords ornamented with inlays are known from the territory of the Przeworsk Culture. Such weapons were frequently decorated with usually realistic depictions related to Roman ideology of war: laurel wreaths, images of Mars — the god of war — leaning on a spear and a shield, Victoria — the winged goddess of victory, military signs (*signa militaria*), legionary eagles, etc. (Fig. 2.20). If we exclude the bog deposit from Illerup in Jutland from further considerations (for many reasons incomparable with the assemblages from burial grounds), in no other region of Europe are swords ornamented with inlaid ornaments as numerous as in the territory of the Przeworsk Culture.[81] One cannot exclude the possibility that, due to the Vandals' inclination for this kind of weapon ornamentation, it was there that inlaid shafted weapon heads made by local blacksmiths first appeared and became widespread.[82]

The popularity of inlaid swords among the population of the Przeworsk Culture is the greatest in Phase C1, although they first appear in the late part of Phase B2.[83] Such swords were unquestionably highly valued, not only due to their ornaments but also because of their utilitarian value. On the one hand, in this case it could be difficult to speak of *Wunderwaffe*. On the other hand, metallurgical examinations have demonstrated that Roman swords greatly exceeded local imitations with regard to their quality. It is actually the manufacturing technology that most often allows for the identification of swords that were made in the Roman Empire. Roman weapons were manufactured with the use of complex technologies of forge-welding iron and steel rods which had different hardness and elasticity (pattern-welding technology). Thanks to this, patterned blades were obtained which were both stroke-resistant and had hard cutting edges and points. What is more, it is supposed that pattern-welded blades were able to better absorb vibrations caused by sword strokes or the parrying of attacks.[84] Such weapons were produced in specialist workshops operating in the Roman Empire.

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[78] Biborski and others 1997, 230 fig. 1:a; Jaskanis 2005, 32 pl. XXVIII:1; Lasota and Stempniak 2015, 228; Stempniak and Lasota 2021, fig. 2:1.

[79] Biborski 1994b, 171–79.

[80] Kolendo 1998a, 32.

[81] Biborski 1994c, 134.

[82] Kaczanowski 1995, 68.

[83] Biborski 1994b, 181–83; 1994c, 134.

Sometimes it is assumed that high-quality weapons may have been made by Roman slaves or captive craftsmen inhabiting Barbarian territories.[85] Identification of Roman swords on the basis of technological analyses is only possible to a limited degree. This is due to the fact that during the second half of the third century AD large state-owned workshops began to operate in the Roman state, as a result of nationalization decreed by Emperor Diocletian. Such workshops mass-manufactured standard weapons that were simpler with regard to their technology. Therefore, it is more difficult to determine the provenance of swords.[86] Thanks to advanced metallurgical examinations of swords from the territory of the Przeworsk Culture, it is possible to say that a vast majority of finds from Phases B2 and C1 are Roman weapons.[87] During this period the population of the Przeworsk Culture must have experienced peculiar moments in their economic and military development. This can be said on account of the fact that so many people could afford valuable Roman weapons, which then were put into graves with their owners instead of being handed down from father to son.

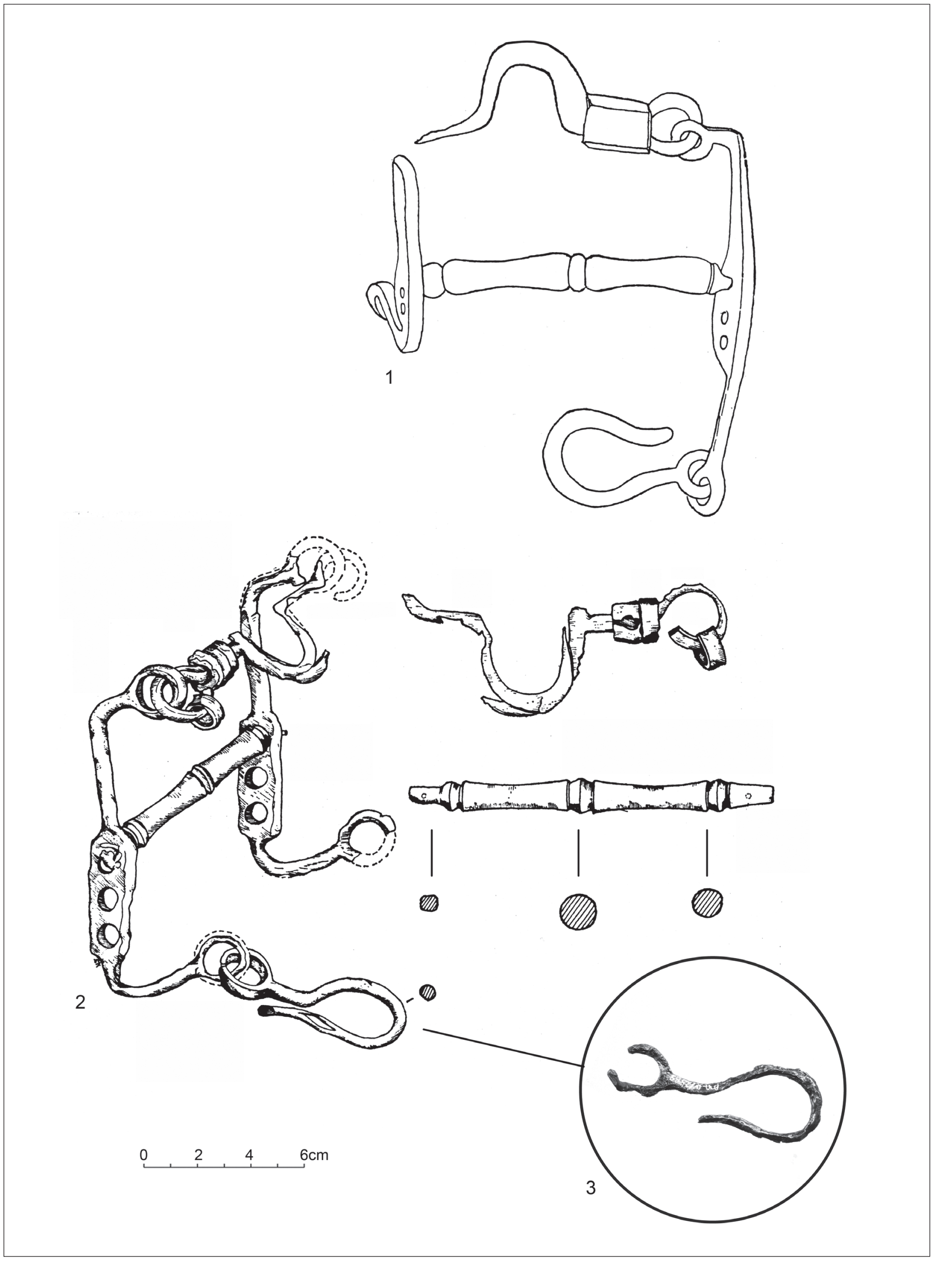

Figure 2.21. Horse mouthpiece from Malkowice, Proszowice District (after Bochnak and Warowna 2015, fig. 2).

Equestrian equipment, that was used in combat, has also been discovered. Parts of horse tack (mouthpieces) can very sporadically be found in Przeworsk Culture graves, although there is no doubt that such artefacts were in use. There are even a few finds with bronze chain reins. On the other hand, these are usually incidental finds, or the contexts of their discovery are not clear.[88] Some such

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[84] Biborski 2000, 59.

[85] von Schnurbein 1994, 377–78.

[86] Kaczanowski 1992, 33; Biborski and Ilkjær 2006, 292–93. An exception is offered by Ejsbøl-Sarry type, which was being brought to the territory of Scandinavia in Phases C3–D, i.e. in the fourth and early fifth centuries, cf. Biborski and Ilkjær 2006, 292–94. It seems therefore that not all *fabricae* went into the hands of the state…

[87] Kaczanowski 1992, 32.

[88] Czekanów, Ostrów Wielkopolski District; Kamieńczyk, Wyszków District; Ostrówek, Inowrocław District; Ścinawa-Jeżów, Ścinawa District; Złaków Kościelny, Łowicz District — Baranowski 1973, 391–477; Kontny 2001b, 86–88; 2009, 104–05.

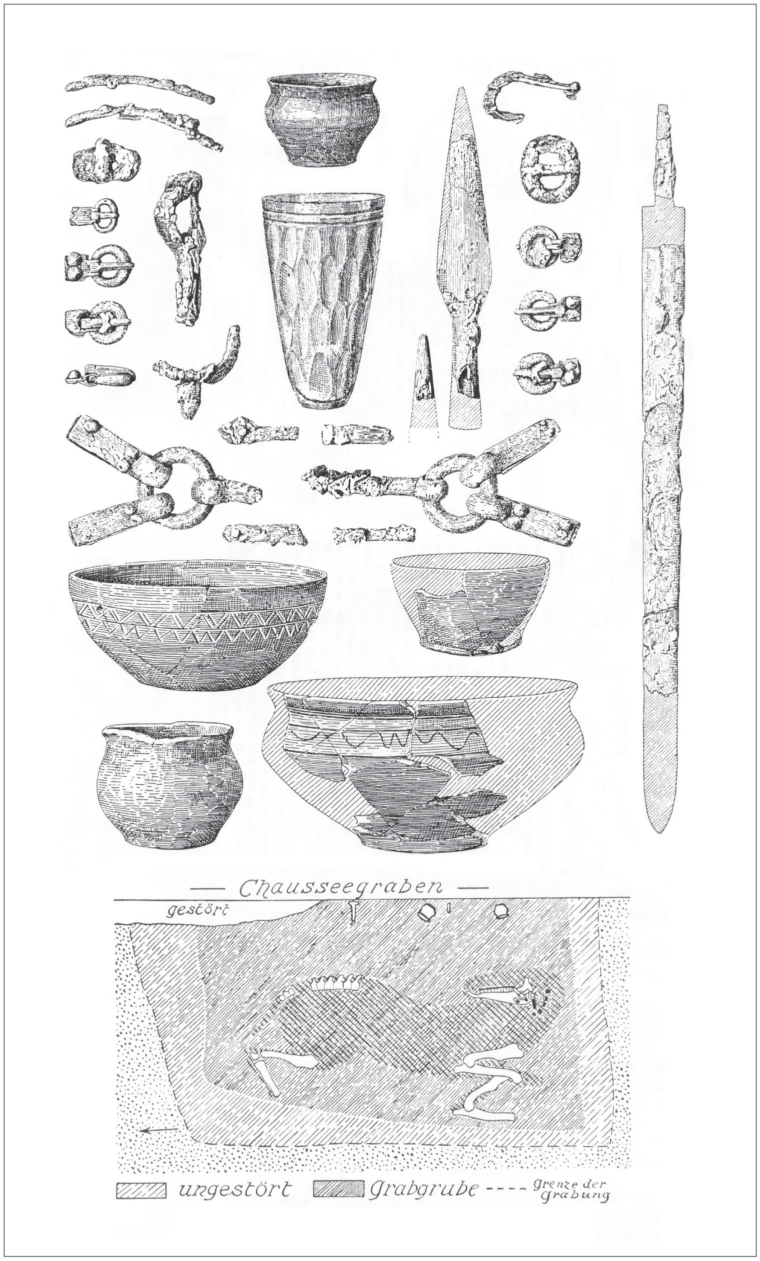

Figure 2.22. Furnishings and the section of the human and horse grave from the locality of Ługi, Góra District (after Petersen 1934, figs 11–13).

artefacts have been unearthed in graves (links from the find from Złaków Kościelny are partially melted by the fire of a funeral pyre). On the other hand, the artefact from Kamieńczyk was hauled up from the Bug River.[89] In this case, it is worth mentioning a peculiar kind of mouthpiece with cheekpieces. It was found in a Phase B1 grave in Malkowice, Proszowice District (Fig. 2.21). This is an atypical form that seems to be related to Thracian artefacts, although the item itself is rather of Celtic provenance. It was used in a very harsh and painful manner of bridling, which allowed the user to master even the wildest of horses. Such an artefact could have also been used for harnessing the horse to a cart.[90]

No 'Vandalic' saddles or their fittings have been found so far. What is more, horse burials which are so numerous among their Balt neighbours are only represented here by individual discoveries. These suggest foreign (especially southern) influences from the nomadic world. Concerning the Sarmatian sphere, two sites can be mentioned: Grzybów, Staszów District, Grave 22 from Subphase B2b, and Ługi, Góra District, from Phase D1 (Fig. 2.22). As regards the Hunnic world, the rich grave from Jakuszowice, Kazimierza Wielka District, Phase D2, must be pointed out.[91] Charred horse bones that are found in graves are very rare, and such discoveries are so sporadic, that there are no grounds to believe that these animals were placed on the funeral pyre together with the deceased. The mentioned remains are of (post)consumption nature (meat consumed during funeral ceremonies) or occasionally we are perhaps dealing with simple tools, e.g. a horse mandible serving as a spatula. In some cases small bones from body parts not meant for consumption were discovered; probably some undefined symbolic meaning had been assigned to them.[92]

On the other hand, the fact that horses were in use is demonstrated by numerous discoveries of spurs. Various kinds of bow spurs (German *Bügelsporen*) were applied. These were initially symmetrical, while in the Younger Roman Period there was a preponderance of asymmetrical spurs, often provided with an additional third terminal for fastening (Fig. 2.23).[93] Spurs that were riveted to shoes are rare. One can mention here Early Roman Period so-called chair-shaped spurs (German *Stuhlsporen*) which are numerous in the Elbe Circle and in Scandinavia, or artefacts made from metal bands which are known in Phase D. The role of spurs as grave

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A find of an acorn-like link from the settlement in Jakuszowice, Kazimierza Wielka District, Site 2 can be added to this list, see Kaczanowski and Rodzińska-Nowak 2009, 758 fig. 3. The same can be said about a fragment of reins from the settlement complex in Gąski-Wierzbiczany, Inowrocław District (Kontny and Rudnicki 2020, 528–29 figs 14.4:10, 14.5:4).

[89] Therefore, it cannot be excluded that this find is related to the stage of settlement of Wielbark Culture population in Vistula's right-bank Masovia. This settlement replaced the Przeworsk Culture settlement in this region at the beginning of the Younger Roman Period.

[90] Bochnak and Warowna 2015, 84–93 fig. 2. See also Kontny 2009, 105 fig. 10.

[91] Kontny 2009, 93–98, with further reading.

[92] Kontny 2009, 92–93.

[93] Ginalski 1991, 53–84.

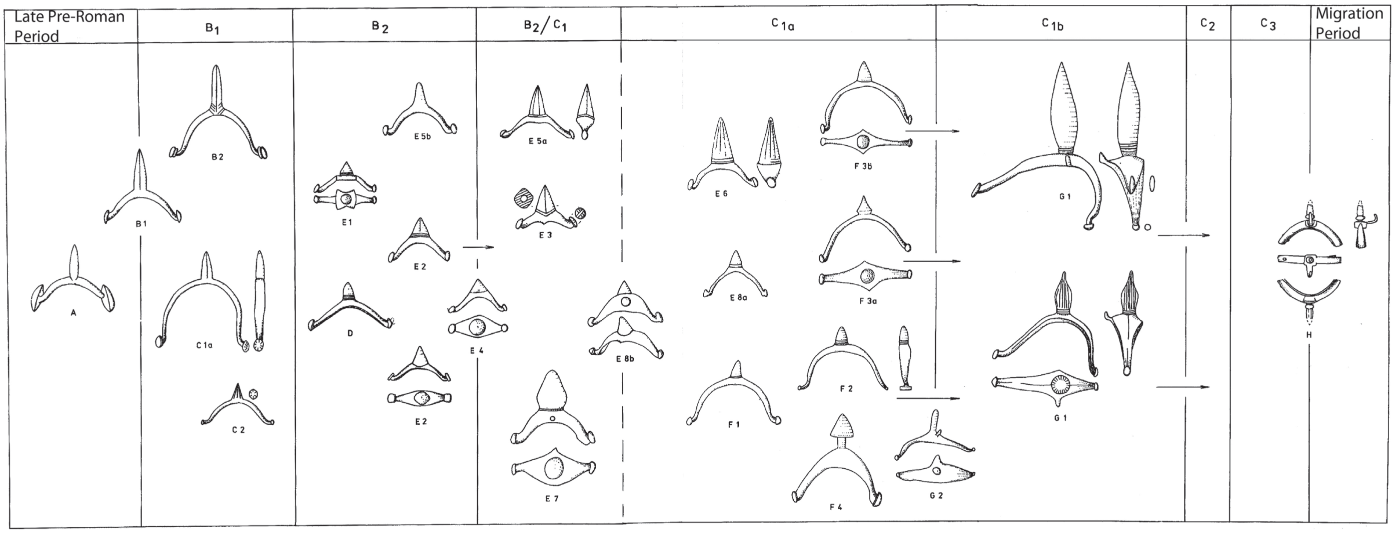
Late Pre-Roman Period
B1
B2
B2/C1
C1a
C1b
C2
C3
Migration Period
A
B 1
B 2
C 1a
C 2
E 1
E 5b
E 2
D
E 2
E 5a
E 3
E 4
E 7
E 8b
E 6
E 8a
F 1
F 3b
F 3a
F 2
F 4
G 2
G 1
G 1
H

Figure 2.23. Variants of spur shapes in the Przeworsk Culture (after Ginalski 1991, fig. 19).

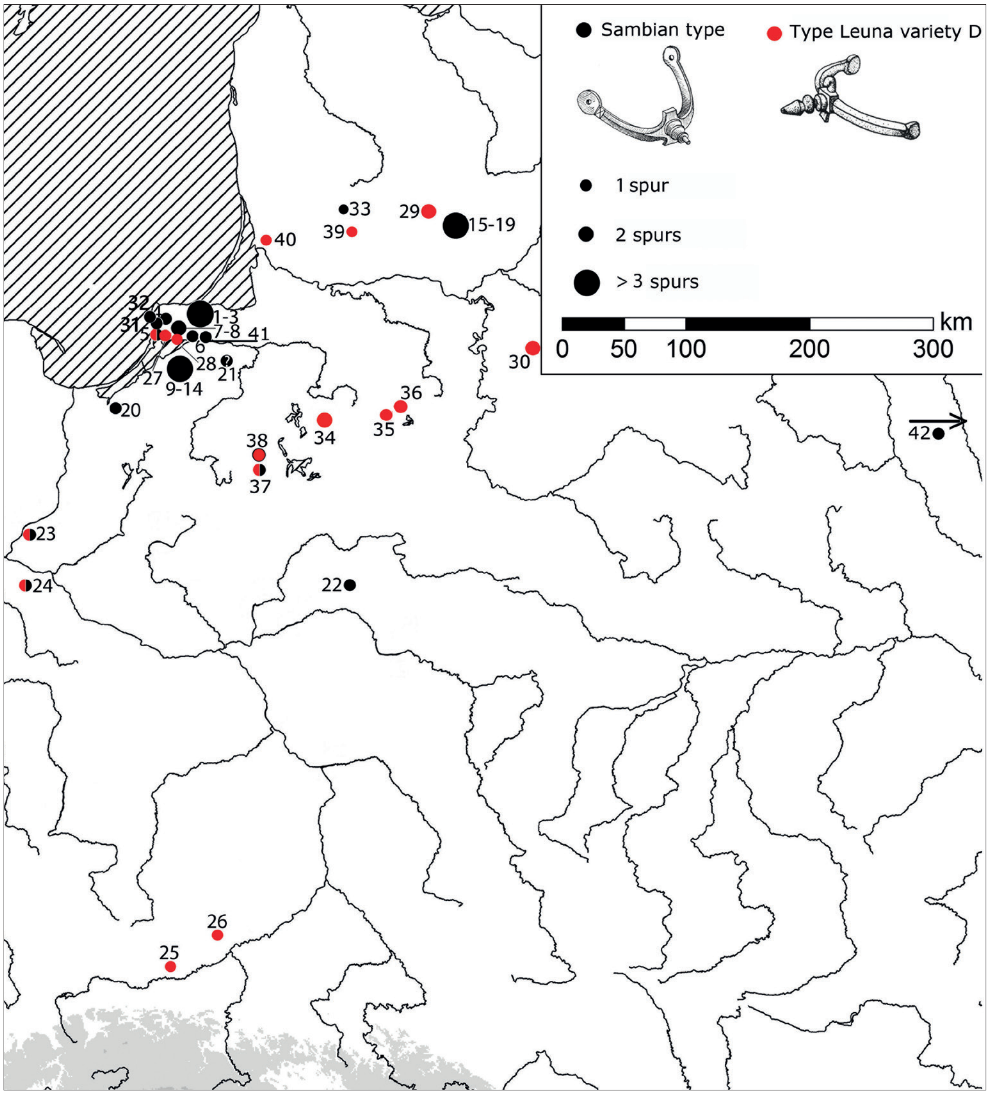
Sambian type
Type Leuna variety D
1 spur
2 spurs
> 3 spurs
0
50
100
200
300
km
1-3
4
5
6
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Figure 2.24. Distribution of Sambian Type (1–6, 8–18) and Leuna Type Variety D spurs (21–26, 29–30) in the central Europe (7, 23, 24 — forms uncertainly attributed): 1–3 — Kovrovo/former Dollkeim, Grave 370 (pair) and stray find; 4 — former Cojehnen, Grave XVII; 5 — Povarovka/former Grebieten, Grave 108 in the S part of the necropolis; 6 — Lûblino/former Serappen, Grave 13; 7–8 — Kotel'nikovo/former Warengen, Grave 44 (pair); 9–14 — Pervomajskoe/former Warnikam, Grave 30, 31 (pair), 49, 59 (pair); 15–19 — Plinkaigalis, Grave 50 (pair), 59 and 79 (pair); 20 — Myślęcin/former Meislatein, stray find; 21 — stray find from Theodor Blell's collection; 22 — Dmochy-Rodzonki; 23 — Grudziądz-Rządz/former Rondsen, Grave 451; 24 — Gąski-Wierzbiczany; 25 — Kraków-Mogiła, stray find; 26 — Pełczyska — stray find; 27 — Povarovka/former Grebieten, Grave 43 in the S part of the necropolis; 28 — former Greibau, Grave 211; 29 — Pašušvys/former Poszuszwie; 30 — Skersabalė; 31 — Povarovka/former Kirpehnen, stray find; 32 — Okunevo/former Grebieten, Grave 170; 33 — Žviliai, Grave 47; 34 — Jasieniec, two stray finds; 35 — Osowa, Barrow 41; 36 — Szwajcaria, Barrow 33; 37 — Czaszkowo, stray find from the war booty offering; 38 — Szestno-Wymysły, stray find; 39 — Pagrybis, Grave 47; 40 — Rudaičiai, Grave 4; 41 — Bol'šoe Isakovo; 42 — Undrich, Feature 3 (after Kontny and Michalak 2021, fig. 8, supplemented by the author).

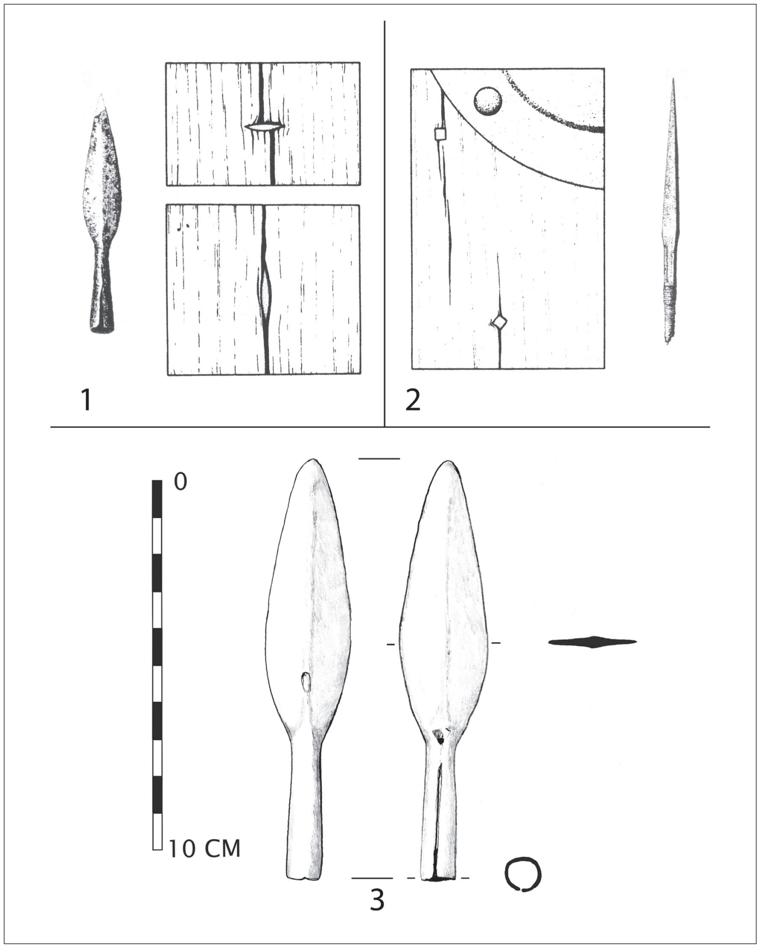

Figure 2.25. Barbarian arrowheads from the Roman Period. 1 — effectiveness of arrows with leaf-shaped arrowheads, as demonstrated by Harm Paulsen's experiments, 2 — effectiveness of arrows with needle-shaped arrowheads, 3 — leaf-shaped arrowhead from the Przeworsk Culture, found in Maliszów-Syców, Oleśnica District (after Kontny 2008a, fig. 15, with further reading).

gifts considerably increases compared with the Late Pre-Roman Period. The peak of this phenomenon falls within the early stage of the Younger Roman Period: during this time, almost every third grave with weapons contained spurs.

From Phase C2 onward the habit of putting spurs into graves was gradually abandoned. This certainly does not mean that horses suddenly went out of use, but rather represents changes in funeral rites. These consisted of quantitative and qualitative depletion of artefact assemblages that were deposited into grave pits. The latest spurs from the territory of Poland, rare and dated to Phase C3 and the beginning of the Early Migration Period, are known mostly from settlements. They are imported Roman riveted specimens of Leuna type, Variety D after Ulrike Giesler[94] but also Variety Leuna E, which are assumed to be Balt forms although they are known from the Germanic milieu as well. Moreover, there are also local pieces made under the influence of Roman specimens. It seems very probable that such items appeared in the Barbarian context due to Barbarian warriors who had served in imperial garrisons and thereafter returned to their homeland (Fig. 2.24).[95]

In graves, there are individual items or pairs of spurs. Explaining this phenomenon is not easy, but it seems that what was decisive here were rather utilitarian, not symbolic (one spur standing for a pair) or material (saving one spur) reasons. A single spur, perhaps worn on the left leg, was of no use for normal riding, but it could have facilitated control over the horse in combat. It made it possible to master a panicking horse which retreated from the enemy attacking from the right side (offensive arms were held in the right hand). It was also possible to dynamically press against the adversary using the horse's weight.[96] But there are other attempts at accounting for it, mostly in a symbolic way, mentioning e.g. a meaningful term of *monosandalism*.[97]

It must be also stressed here that the horses used by the Przeworsk Culture communities were not as tall as most present-day breeds. On the basis of archaeozoological analyses of bone remains from settlements it can be concluded that height at the withers of Przeworsk Culture horses was about 131.7 cm on average, usually between 125 and 140 cm.[98]

Another category of artefacts that are sometimes found in grave furnishings are arrowheads. However, such finds are rather rare (Fig. 2.25:3). They become slightly more numerous toward the end of the Roman Period, but even then the share of graves with weapons which contain finds of arrowheads does not exceed a few per cent. Such artefacts are usually found individually. Discoveries of more than one arrowhead in a grave assemblage are sporadic.[99] Such artefacts were composed of flat blades (rarely provided with two barbs) which ended with sockets that were not fully forge-welded. Apart from unique finds, needle-shaped arrowheads are not known from the territory of the Przeworsk Culture. They were attached to the shaft with the use of tangs and provided with narrow well-penetrating blades which were quadrilateral in cross-section. Such arrowheads were much more effective in combat, as demonstrated by experiments carried out by Scandinavian archaeol-

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[94] Giesler 1978.

[95] Kontny and Michalak 2021; Kontny in preparation b.

[96] Kontny 2002b, 60.

[97] Bochnak 2004, 27; see Lebeuf 2003.

[98] Kontny 2009, 107; cf. Bajkowska 1999.

[99] Kontny 2008a, graph 14.

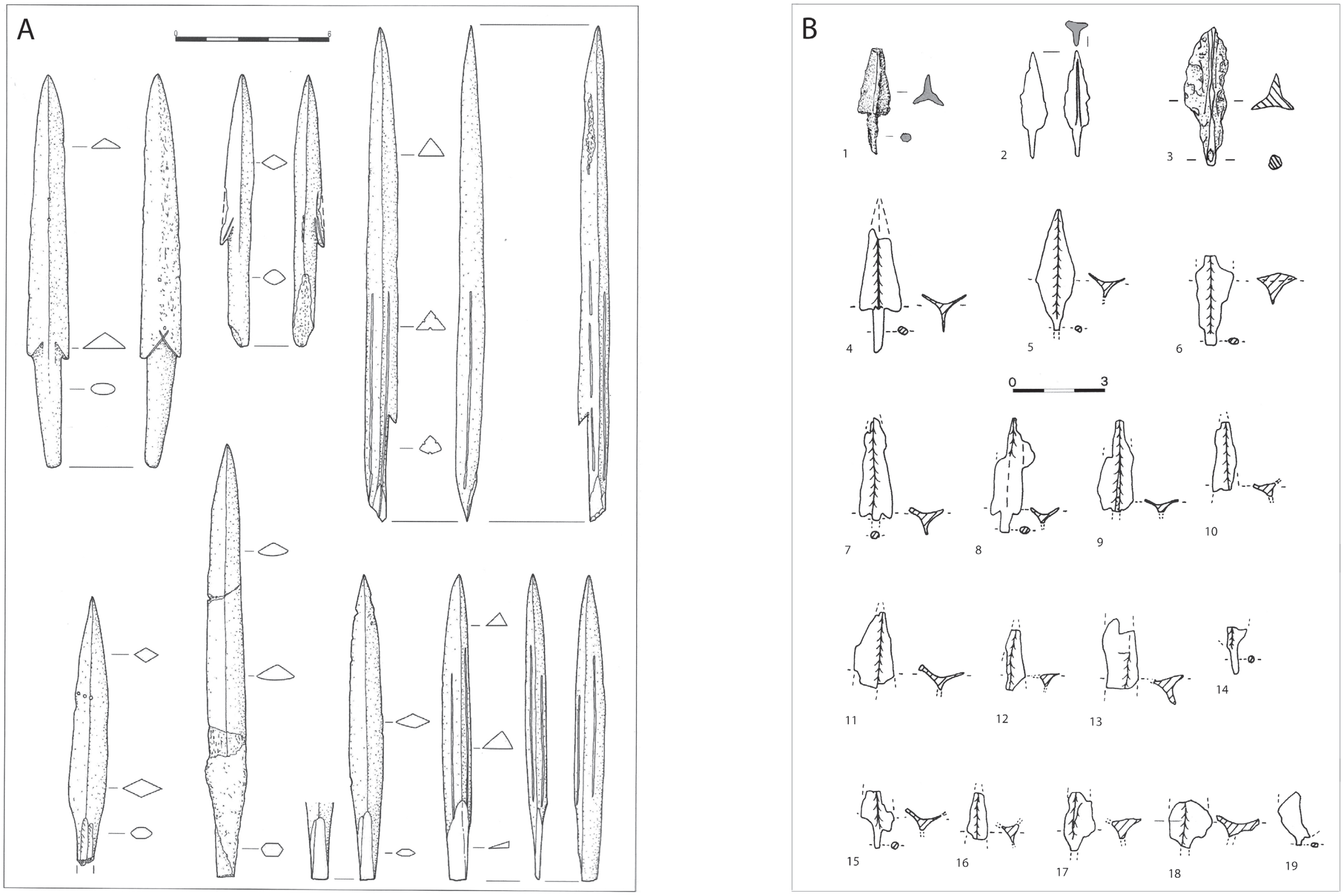

Figure 2.26. Arrowheads representing foreign traditions from the territory of Poland, A — bone arrowheads of Scandinavian type from Karczyn/Witowy, Grave 306 (after Bednarczyk and Romańska 2015, pl. XLV; B — examples of Sarmatian-type trilobate arrowheads. 1 — Dybowo, stray find; 2 — Michałowice, Groove Feature no. 31; 3 — Podlesie, Feature 109; 4–19 — Grzybów, stray finds (after Kontny and others 2019, fig. 10, with further reading).

ogists.[100] As a result of the experimental studies it was found out that leaf-shaped arrowheads ricocheted from plates of shield replicas or bent in their top parts, especially if shield planks were covered with leather (Fig. 2.25:1–2). The combat effectiveness of needle-shaped arrowheads was also proved by other experiments carried out by Ole Nielsen.[101] Unlike leaf-shaped arrowheads, needle-shaped ones penetrated ring-mail armour, for the sake of the experiment placed on the body of a dead pig. Good penetration properties were also demonstrated by arrowheads that were similar to needle-shaped ones, but were made from antler. Such arrowheads were in most cases triangular in cross-section.[102] One of the arrowheads from the bog site in Vimose may have even been broken off near its point, and it is believed that this damage was caused by hitting against mail armour.[103]

Arrowheads made of bone were typical of Scandinavia, and they have been recently discovered in an Early Roman Period Grave 306 in the Przeworsk Culture cemetery in Karczyn/Witowy, Inowrocław District, Site 21/22 (Fig. 2.26:A). This grave belonged to a *senilis* male. A few arrowheads of this kind were deposited at the side of the dead, perhaps in a quiver.[104] This was an inhumation burial, which is exceptional for the Przeworsk Culture, however, as far as Cuiavia is concerned, such cases are quite frequent. This grave could be one of the earliest of this kind.[105] It is theoretically possible that such arrowheads were more frequent in the Przeworsk Culture, but they were not found due to the widespread practice of cremation, which led to the destruction of artefacts made of organic materials. On the other hand, no such finds are known from settlements. At present, it seems that the discovery from Cuiavia is an isolated one and may be related to the peculiar nature of this area that was reached by influences from various regions of Barbarian Europe.

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[100] Paulsen 1998, 421–24.

[101] Nielsen 1991.

[102] Pauli Jensen 2009b, 369.

[103] Pauli Jensen 2009b, 373 fig. 6.

[104] Bednarczyk and Romańska 2015, 28–30, pls XLIV, XLV, CXV.

[105] Bednarczyk and Romańska 2015, 59.

Leaf-shaped arrowheads were of little use in combat but were more effective for hunting. This is due to the fact that broader blades caused greater wounds in the animal's body and facilitated finding the prey by following blood traces. A preponderance of leaf-shaped arrowheads in the Przeworsk Culture demonstrates that bows and arrows were used by the Vandals as hunting weapons. There is no doubt that they were part of warriors' daily life. Hunting was a kind of training, and bows were indispensable during long-distance military expeditions. Settlements that could be plundered were not always found on the march route. In spite of this, bows were considered hardly useful in combat and thus they were rarely used in battle, and even then only as supplementary weapons. This is also implied by the low number of arrowheads found in graves, suggesting that they were treated in a different manner from combat weapons. However, this situation is not representative of the entire *Barbaricum*. An analysis carried out by Xenia Pauli Jensen demonstrates that around two-thirds of 1500 examined arrowheads were combat weapons, while only one-third were used for hunting.[106] This researcher believes that bows may have been hunting weapons in Scandinavia, but in the Younger Roman Period they began to be used in warfare. Bows and arrows with needle-shaped arrowheads may have become specialist weapons of war in the late third century. This seems to be indirectly supported by the occurrence of shields whose plates were reinforced with a layer of animal intestines.[107] However, this phenomenon evidently did not apply to the Przeworsk Culture.

There is yet another phenomenon known from the Przeworsk Culture, in its southern part, i.e. Sarmatian trilobate tanged arrowheads (Fig. 2.26:B). They are unique to the territory of Poland. The items in question come from burial grounds and are dated to the very beginning of the Roman Period. Their appearance may be linked with the decline of the Zarubincy Culture, resulting, as it is believed, from the Sarmatian invasion. However the Sarmatian arrowheads need not necessarily indicate that Przeworsk Culture warriors participated in large numbers in these events; the adoption of certain traits of military gear was possible either when warriors belonged to ethnically mixed military retinues, or when they fought against one another. Evidently, this did not result in a change of the Przeworsk Culture model of military equipment.[108]

The shape of quivers that were used by the Vandals remains unknown. It is only possible to point out analogies from the Younger Roman Period and the Late Roman Period, as well as from the Migration Period in northern Europe. Quivers made from organic materials (wood or bark) are mainly known from the Nydam bog site in Schleswig.[109] Other finds are known from individual inhumation graves in the Elbeland zone, such as Häven, Ldkr. Parchim, Grave 3/1968,[110] the splendid grave from Gommern, Ldkr. Jerichower Land,[111] and perhaps also Woldegk, Ldkr. Mecklenburg-Strelitz.[112] These artefacts were cylinder-shaped and were about 50 cm long.

The axe was a weapon that was quite often used in Barbarian Europe in the Roman Period. Axes were numerous in Balt territories (see Chapter 4),[113] during the Younger and the Late Roman Period — in the Elbe Germanic cultural zone and in the Luboszyce Culture which was the south-western neighbour of the Przeworsk Culture, and during the Late Roman and Early Migration Periods — in the lands of the Laeti upon the Rhine. They are also found in Crimea[114] and in the Černâhov Culture,[115] and probably also in the Wielbark Culture.[116] However, axes were not very popular among the Vandals, and they are rare both in graves and in settlements.[117] It is certain that axes were not a significant component of Vandal weaponry in the Roman Period.

Of exceptional nature are finds of protective armament: helmets and body armour. Discoveries of Roman *lorica squamata* (scale armour) and also of *lorica segmentata* (cuirass constructed of iron strips) are unique in the *Barbaricum* and there are no such artefacts discovered in the Przeworsk Culture. Only one Roman Period helmet is known from its territory, a find from a grave in Mala Kopanya, Vinogradov District in Transcarpathian Ukraine. This possibly Celtic artefact is dated to Phase B1 and it can be related to late influences of the La Tène Culture. Mail armour which is also believed to be a possible Celtic import was discovered in the same grave.[118] Furthermore, large fragments of mail — in this case, of Roman provenance — were found in the settlement in Nowa Huta-Pleszów, Kraków District, in Grave 22 in Witaszewice, Łęczyca District,[119] as well as in a plundered grave from Barrow 3 in Psary, Góra District.[120] Mail armour was perhaps a marker of a warrior's high status, but it is certain that it was not commonly used. On the other hand, small fragments of mail that are found in women's graves are much more common in the Przeworsk Culture. Such fragments were used in the manufacture of ornaments and amulets (Fig. 2.19:2). It might have been assumed that amulets from mail fragments could offer similar protection to that which mail armour provided in combat. These mail parts are usually so fragmented that they offer no grounds for the reconstruction of their use by women. It is presumed that in some cases such artefacts had been used as parts of bracelets (Opatów, Kłobuck District, Grave 49).[121] On the other hand, it is certain that mail fragments were threaded on the pins of fibulae that fastened clothes together (Łączany, Radom District, Grave 55).[122]

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[106] Pauli Jensen 2009b, 372.
[107] Pauli Jensen 2009b, 374.
[108] Kontny and others 2019.
[109] Rau 2007, 141–54.
[110] Schuldt 1969, 188 fig. 1.
[111] Becker 2010b, 103 pls 18:1–8.
[112] Schach-Dörges 1970, 251 pl. 64:5.
[113] Kontny 2018a.
[114] Kontny and Savelâ 2006, 136–38.
[115] Magomedov and Levada 1996, 307–08 fig. 5.
[116] Kontny forthcoming b.
[117] Kieferling 1994, 356; Kontny 2008a, 130 diagram 15.

Interestingly, all precisely dated grave assemblages with small fragments of mail date to Horizon B2/C1, that is more or less the last forty years of the second century AD.[123] In this period, to the south of the territory of the Przeworsk Culture, the so-called Marcomannic Wars (AD 166–180) were waged with the Roman Empire. Written sources directly confirm the participation of the Vandals or, to be more precise, some Vandal tribes — the Hasdingi, the Lacringi, and the Victovali — in these events. Access to Roman weaponry was certainly facilitated in the course of hostilities. It seems probable that mail fragments which were converted into amulets were kinds of 'souvenirs' from military expeditions. Mail armour could have been taken from dead Romans who fell on the battlefield or were killed in ambushes. It is of interest that ornaments of this kind were especially popular among Vandal women. Well, *de gustibus…* It is not the only instance of the non-functionality or low aesthetic value of accessories that were in vogue in a given period: see, for example, nearly half-metre-long Bronze Age pins, Renaissance ruffs, Enlightenment wigs (nests of lice), or present-day high heels. Owing to analyses of weaponry discovered in graves, it is possible to point out weapons that were markers of a warrior's status. As was already mentioned, three groups of warriors can be distinguished in the Roman Period (Fig. 1.3).

a) Chieftains — armed with precious weapons ornamented with gilded silver fittings, manufactured according to local tradition. What was decorated this way were: parts of belts (waist belts and *baltei* that were worn over the shoulder and on which swords were suspended), shields (bosses and grips, plank fittings), swords with scabbards, as well as horse tack.
b) A group in the middle of the hierarchy, who used bronze fittings of shields, sword scabbards, and belt parts. This group included foot warriors.
c) A group of 'common' infantry, who were equipped with spears, javelins, and shields provided with iron fittings.

Such conclusions can be drawn from the analysis of the Scandinavian sacrificial lake offering of Illerup. These observations are also confirmed in the furnishings of certain graves of both Germanic and Sarmatian warriors.[124] However, in the case of the Przeworsk Culture the aforementioned criteria fail. Local warriors rarely accepted the use of raw materials other than iron in the manufacture of weaponry. There are discoveries of shield bosses with bronze rivets and bronze rim fittings, which are more common in the eastern zone of this culture.[125] Bronze pieces of equestrian equipment, such as spurs or the aforementioned headgear with chain reins, occur in the entire territory of the Przeworsk Culture. However, such finds are pretty rare. Silver was basically applied only as raw material for inlays on shafted weapon heads and swords. An analysis of Roman imports is of interest against this background. In the territory of the Przeworsk Culture almost exclusively iron weaponry was deposited into graves which refers to Roman weapons, viz. swords and mail armour, too; the latter usually preserved only in fragments. Discoveries of weapons in settlements are rare and also in this case there is a vast preponderance of iron artefacts. Other items, especially sword scabbard fittings, were made

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[118] Kaczanowski 1992, 53, 57.

[119] Kaczanowski 1992, 57–58, with further reading.

[120] Makiewicz 1995, 49–51.

[121] Madyda-Legutko and others 2011, 40–41, pls XXVII:3–4, CDLVII:2. In this case an interpretation of the ring-mail fragment as the rim of a bracelet on which miniatures of tools and a shield were suspended is untenable. Joined terminals which gave grounds for such interpretation were in fact solely connected by corrosion. What is more, such an ornament would have been uncomfortable in use, see Czarnecka 1994, 250. Another find of weaponry, i.e. a Roman box-shaped chape, was used as an amulet that was suspended on the neck of a child. It was found in Grave 1186 at Opatów — Madyda-Legutko and others 2011, pl. CDLVII:2 (Fig. 2.19:1).

[122] Unpublished finds from the research of Witold Bujakowski, MA. I am obliged to Małgorzata Gorzkowska, MA for making these finds available.

[123] Czarnecka 1994, 246.

[124] von Carnap-Bornheim and Ilkjær 1996, 291–96, 483–85. To some extent, this conclusion results from the Germanization of Sarmatian military culture in the Younger Roman Period.

[125] Andrzejowski 2001, 77–78.

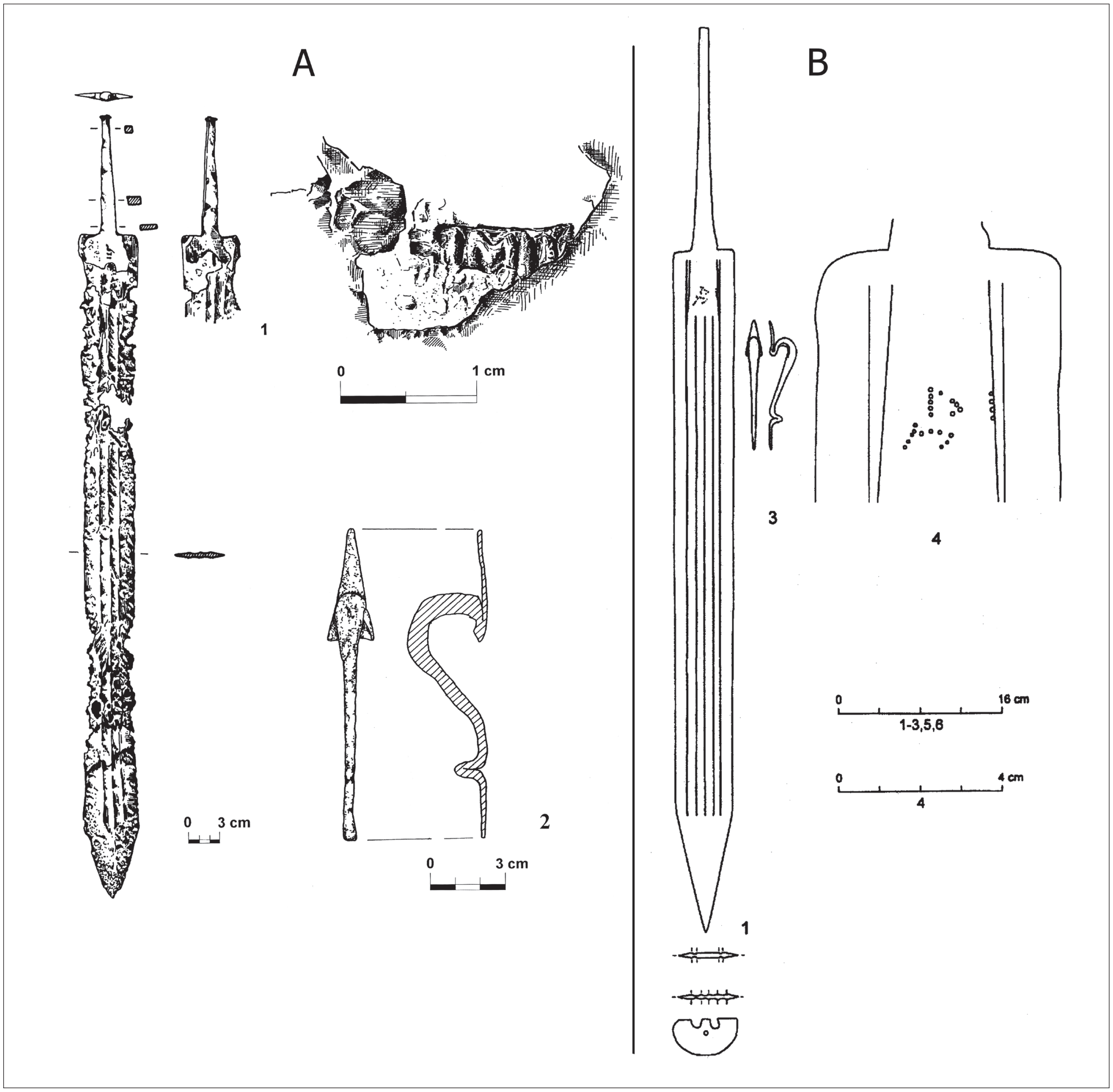

Figure 2.27. Roman swords and Barbarian dolphin-like scabbard slides from the territory of the Przeworsk Culture. A — Starachowice, Starachowice District, B — Kraśnik-Piaski, Kraśnik District (after Kontny 2003a, pl. 3).

locally. The distribution of Roman bronze suspension slides of sword scabbards of various types demonstrates that although such artefacts were known in various neighbouring regions, they did not reach the territory of the Przeworsk Culture.

On the other hand, Roman artefacts were often imitated with the use of iron as raw material. Early Roman Period V-shaped chapes (sword scabbard fittings) with globular terminals were manufactured in this way. Locally made iron suspension runners were used in the later period.[126] A good example of the simultaneous use of Roman patterns and faithfulness to local traditions is offered by a sword scabbard slide from Grave 11 in Kraśnik-Piaski, Kraśnik District. It was accompanied by a Roman sword with a *punctim* inscription. The shape of the suspension slide resembled a dolphin, which makes it similar to Roman bronze runners. On the other hand, it was obviously made of iron. A similar item is known from the cemetery in Starachowice, Starachowice District[127] (Fig. 2.27). Does this mean that only sword blades were imported, and that they were locally hilted and provided with scabbards? Or perhaps sword-scabbard kits were brought from Rome, and Roman bronze fittings were replaced with locally

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[126] Kaczanowski 1992, 35, 39–42, 73; 1994a, 207–22.

[127] Biborski 2000, 57 fig. 12: 1–2; van den Berghe 1998.

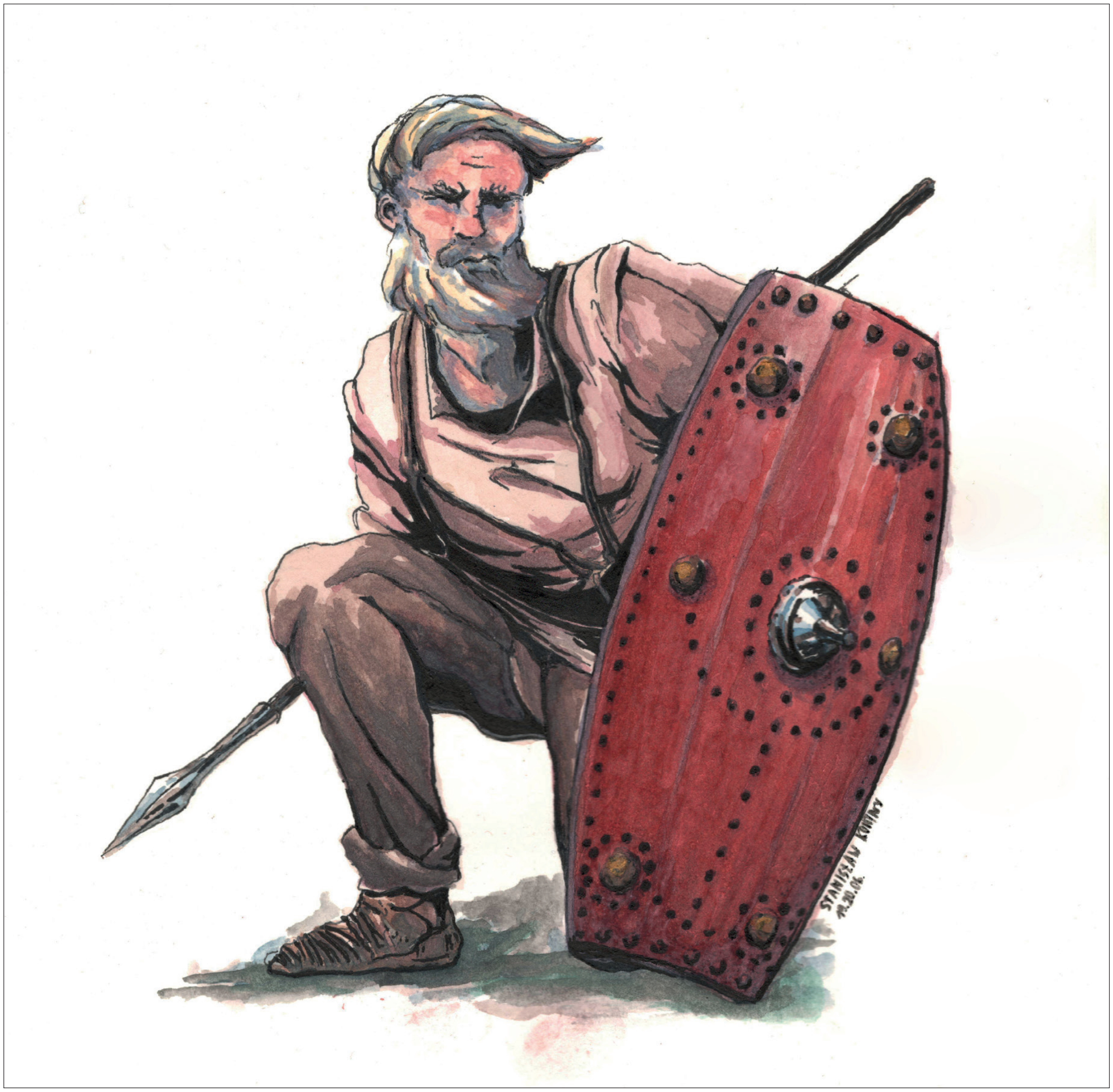

Figure 2.28. Reconstruction of the Przeworsk Culture lower rank warrior from the Early Roman Period (drawing Stanisław Kontny, concept by Bartosz Kontny).

made iron ones, according to native tastes? So far, there is no evidence to solve this problem.

In such circumstances it is necessary to point out another criterion for identifying the high-status warriors. Those of the highest rank were buried in splendid graves, which stood out with their form, lavish furnishings, and the use of inhumation rite (non-cremated dead were deposited into graves). Some 'princely' graves were furnished with weapons. Among the Early Roman Period graves of the so-called Lubieszewo horizon[128] it is possible to mention the grave from Sandomierz-Krakówka, Sandomierz District[129] or Grave 4 from Chojny, Sieradz District.[130] The plundered Grave 22 from Witaszewice, Łęczyca District comes from the beginning of the Younger Roman Period[131] and the same chronology may perhaps apply to the aforementioned grave from Barrow 3 in Psary, Góra District.[132] There are premises to believe that a sword was deposited into one of the splendid graves from Wrocław-Zakrzów (so-called Hassleben-Leuna-Zakrzów horizon of splendid graves from Phase C2). This sword merely survived as a strip of rust (the furnishings were not burnt on the funeral pyre).[133] The aforementioned splendid graves with horses — from Ługi, Góra District[134] and from Jakuszowice, Kazimierza Wielka District — are dated to the Early Migration Period.[135]

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[128] A definition of splendid graves (also referred to as 'princely' graves) is still a matter of debate. Not all the aforementioned graves meet the criterion of inhumation or location within the necropolis in a place that was solely reserved for deceased representatives of tribal elites. It is actually these criteria of splendid graves that are questioned. However, abundance and high quality of grave furnishings (including Roman imports) speaks for including these graves into the discussed group.

[129] Kokowski and Ścibior 1990.

[130] Kaszewska and others 1971, pl. 166.

[131] Kaszewska and others 1971, pl. 167.

Warriors of a lower but still prominent status were probably buried in graves furnished with swords (especially imported ones) and parts of equestrian equipment, usually accompanied by shafted weapons and shield fittings. Wide iron buckles with rectangular frames provided with double tongues are also believed to be markers of a relatively high status of the deceased warrior. Such buckles are usually found in assemblages which include Roman swords.[136] A double pin was necessary to secure proper fastening, as the width of belts was considerable, even exceeding 10 cm. Such belts were popular in Phases B2b and B2/C1 and they somewhat resembled the belts of the Tatra Mountains brigands. Thus, belts of this kind might have had an additional function, the protection of the belly against strokes.

Warriors of lower ranks were interred with pole weapons (sometimes a pair) and shields (Fig. 2.28).

This hierarchy has obviously been outlined in an extremely schematic manner and it cannot precisely depict the reality. Borders between individual groups of warriors were naturally not that clearly defined, bearing in mind that one successful plunder expedition could have caused a rapid advance of a young, able (that is, ruthless) warrior, while one defeat could have degraded even a respected and experienced leader. A reconstruction of the internal structure of warrior groups is even more difficult due to the fact that grave furnishings had their own symbolism which is not necessarily clear for present-day researchers. Thus, sepulchral weapons were not always real arms that were used in combat. On the other hand, such a reservation rather applies to individual cases (e.g. placing an exceptionally valuable imported artefact in the grave in order to stress an extraordinary deed of the dead),[137] and is of no prominent significance for the reconstruction of the general image of weaponry.

With regard to that, burials from Subphase B2b are the most informative. This phase is exceptional in the Przeworsk Culture.[138] Standardization of weaponry can be seen at this time, which concerns both individual weapon categories (with special reference to shafted weapon heads), weapon sets that are discovered in graves, as well as combat techniques (fighting with spears and javelins). This is accompanied by a rapid increase in the number of weapon graves. In this period an expansion of the Vandal population to the south commences (it is confirmed by the presence of the Przeworsk Culture graves in the territory of present-day Slovakia and Transcarpathian Ukraine).[139] It is therefore possible to assume that this demonstrates a clear militarization of social structures and an increase in enthusiasm for war. It is worth underlining that this period and the time slightly after are a peak of production in the Holy Cross Mountains iron metallurgy centre, the largest of its type in all Barbarian Europe. Was it supposed to meet the demand for iron which was indispensable for weaponry manufacture? A wave of imported Roman swords is also initiated in this period. These were perhaps imported (or taken as booty) upon the order of chieftains who were organizing military expeditions.

In previous periods, sets of weapons that can be found in graves quite often do not match weaponry that was actually used in combat (e.g. shafted weapon heads with barbs). On the other hand, in the Younger Roman Period there is an increase in the significance of symbolic behaviours. This can be seen in the fact that only individual weapons were deposited into graves, and that such artefacts were often strongly fragmented in the course of ritual destruction. A special role is played by the shield in this time. At the end of the Roman Period and at the beginning of the Migration Period, fragments of shield bosses and grips are the sole finds of weaponry in almost every third grave that was furnished with arms. The protective significance of the shield is obvious and perhaps the frequent presence of these artefacts in warriors' graves should be interpreted from this point of view.[140] The increase in symbolic behaviours is related to a general impoverishment of grave furnishings which can be observed in this period.

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[132] Makiewicz 1995, 49–51.

[133] von Carnap-Bornheim and Kreft 2001, n. 29.

[134] Petersen 1934.

[135] Abramowicz and others 1959, pl. 15.

[136] Madyda-Legutko 1990, 552–85.

[137] Discoveries of Roman daggers (*pugiones*): a stray find (?) from the burial ground at former Ilischken in the Balt Dollkeim-Kovrovo Culture and another found in Grave A4103 in Hedegård, Ejstrup District in Jutland can be perceived within this framework, see Chilińska-Früboes and Kontny 2018, 83–88 figs 4, 7–9; Madsen 1997, 74–83 figs 22–24.

[138] Kontny 2005, 215–32.

[139] An increased onrush to the south resulted in the emergence of the Przeworsk Culture settlement traces in the territory of Transcarpathian Ukraine (Ardanove, Grave from AD 1900 — Kobal' 1997, 32–34 fig. 2) and in Slovakia (Zemplin, Graves 23, 50, and 69 — Budinský-Krička and Lamiová-Schmiedlová 1990, 249, 251, 253 pl. III:21–35, IV, VI:15–24, VIII:1–6) in the first half of the second century.

[140] Kontny 2002a, 109–11, 118–19.

On the other hand, there are still cemeteries where the dead were buried according to old principles, of which the necropolis in Korzeń, Płock District is an example.[141]

On the basis of weaponry finds in graves it is possible to make an attempt at reconstructing actual weapon sets and combat tactics (Fig. 2.29).[142] Shafted weapons were the main offensive arms and these were in all probability basically used in infantry combat. Pairs of shafted weapon heads occur most commonly in graves in the Early Roman Period. Such artefacts were either universal weapons that could have been used both in close combat and at a distance, or (especially in Subphase B2b) the specialized javelins and spears. It is therefore possible to assume that combat commenced with throwing one weapon at the adversary (it is impossible to simultaneously fight with two shafted weapons and a shield). This probably took place while warriors were running toward the adversary. It was essential to take a run-up in order to increase the impact and reach of the throw. This all occurred in a very short time, as the range of a javelin throw was short, probably not exceeding 20 m.[143] Therefore, after throwing their javelins warriors had little time to switch to weapons that were usable in close combat, i.e. either to take the other shafted weapon from the hand which was holding it and the shield or to draw swords.

The distance between both approaching troops was thus a true killing zone — warriors who were too slow would have been wounded or killed almost immediately. On the other hand, those who were skilled enough were able to throw even a few javelins before engaging in close combat. This was demonstrated by experiments that were carried out by re-enactors who were naturally of limited skill.[144] What was used in close combat were shields and — in the first phase — other shafted weapons. Swords were used in close-quarters combat (Fig. 2.30). Horses in all probability played only a minor role in combat and were mainly used as a means of transport or markers of the warrior's status. They were rarely used in the main encounter. Iconographic depictions (the Column of Marcus Aurelius, or the Portonaccio sarcophagus) and written sources do not testify to the existence of cavalry as a military formation in the Germanic world.[145] Plundering expeditions were an exception to this rule. This supposition also concerns the Younger Roman Period, although weapon sets from Phase C1 often contained spurs and their absence from later grave furnishings is a result of changes in burial rites. The possibility cannot be excluded that many burials of this kind were related to frequent military expeditions.

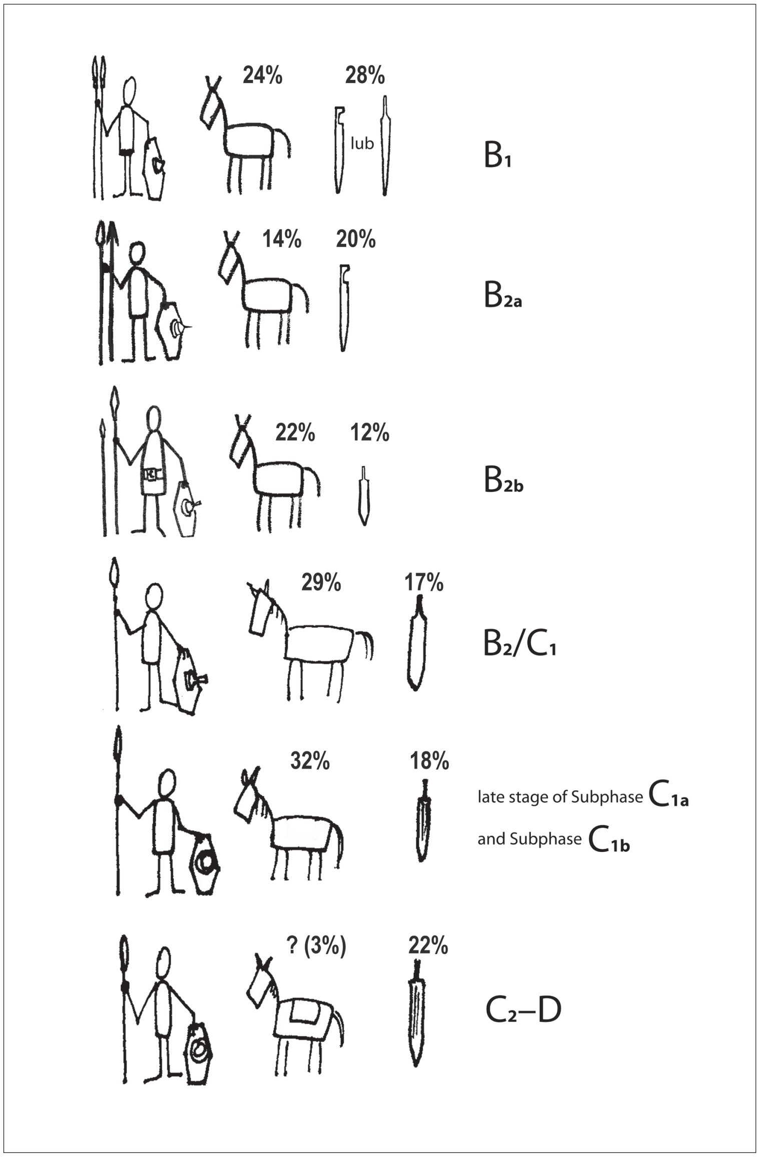

Figure 2.29. Weaponry kits in Przeworsk Culture graves from the Roman Period and the beginning of the Migration Period (after Kontny 2008a, fig. 16).

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[141] Kempisty 1968a.

[142] Kontny 2008a, 130–32 fig. 16.

[143] Experiments with Roman javelins used by detachments of lightly armed *velites* (who resembled Germanic troops) — both with short (0.75–1 m) and with longer ones (1.25–1.75 m) — allow for the assessment of the throw range at a dozen or so metres, or at slightly more than 20 m at best. Experiments were carried out in conditions close to (real) battle, that is, with the shield and the javelins being held in the left hand. These experiments demonstrated that a longer range could be achieved with longer weapons. It is no surprise that there was no time for accurate aiming. On the other hand, this can be considered redundant while facing a compact mass of enemies, see Griffiths and Sim 1993, 4–12.

[144] Griffiths and Sim 1993, 7–8.

[145] Kontny 2009, 102, with further reading.

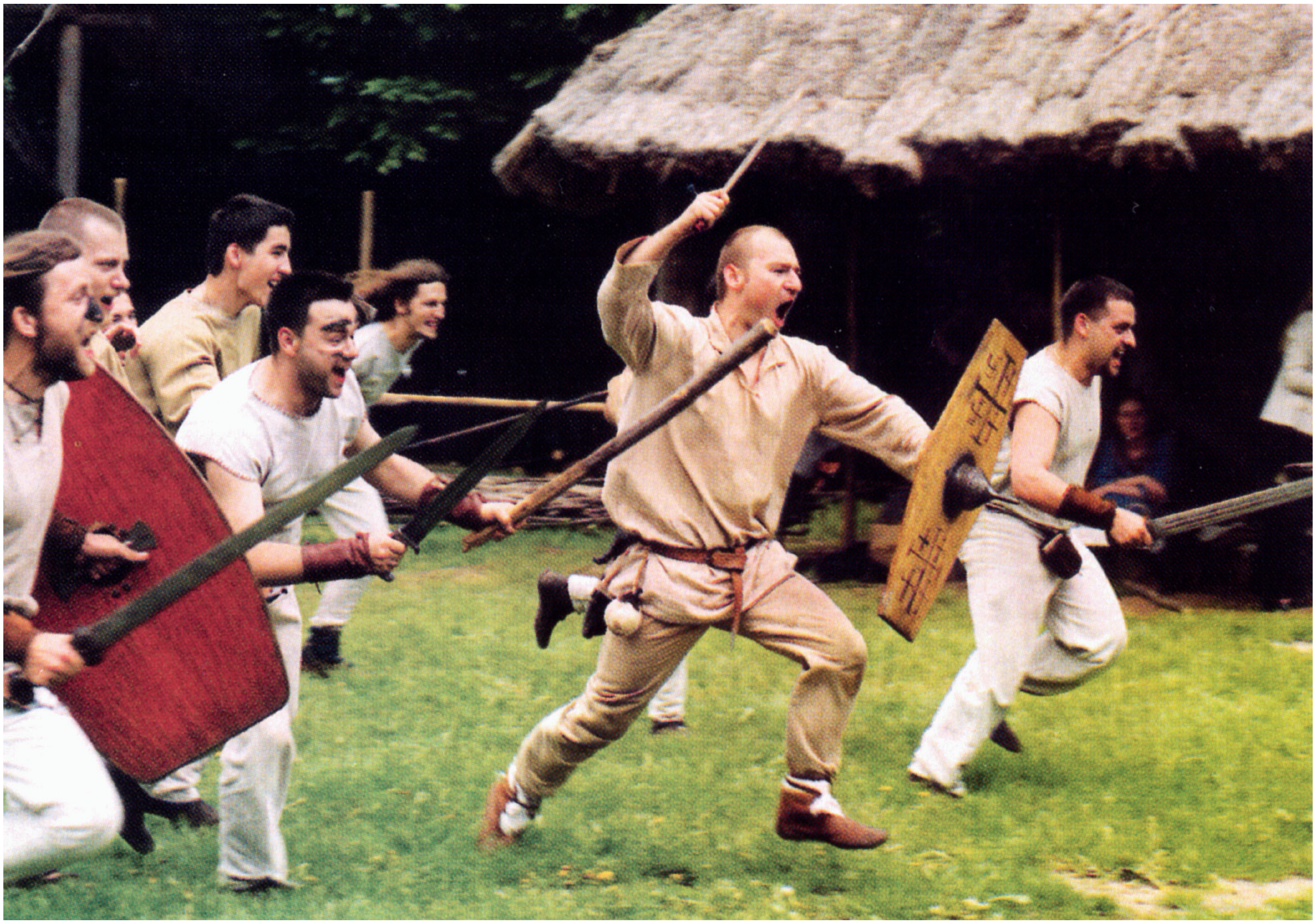

Figure 2.30. Examples of weaponry reconstructions – presentations in the course of the 'Żelazne korzenie' (Iron roots) archaeological festival in 2003 (photo Marcin Osojca, after Kontny 2008a, fig. 17).

On the other hand, there is no evidence to suggest that more extensive use of horses meant an organization of regular cavalry units in accordance with the Roman pattern.[146] Long, cutting swords that could have been used from horseback are found in graves since the Younger Roman Period. Such swords were effective in mounted combat but they were chiefly used for fighting on foot. Similar conclusions can be drawn from the analysis of finds from the aforementioned war booty offering of Illerup, where there was very little evidence for the use of horses, as compared with the number of recovered swords. The spread of metal shield fittings in this period was probably enforced by the appearance of long, cutting swords. It was aimed at increasing the toughness of shields reinforced with iron against chopping strokes that were more powerful than previously, due to a longer lever arm. Changes in the Younger Roman Period also manifested in a diminishing share of graves that were furnished with more than one shafted weapon head. Eventually, such cases disappeared completely. This was probably the result of favouring spears or weapons that could be both thrown and used in close combat and the abandonment of javelins.

The model of weaponry that was in use in the Przeworsk Culture played a very important role in the central European *Barbaricum*, especially in the Early Roman Period and at the beginning of the Younger Roman Period. In this time (first–second centuries) the weaponry of neighbouring peoples was modelled on this pattern. The Wielbark Culture, the Luboszyce Culture, and the Lubusz Group are archaeological manifestations of these peoples. On the other hand, Przeworsk Culture prototypes can be even found in armaments in the Elbe Circle, in the West Balt Circle (Bogaczewo Culture), or in Marcomannic-Quadic territories. In the later period the Scandinavian weaponry canon was more popular. This can be explained by, among other factors, the high level of organization of north European troops that was certainly impressive for warriors from other parts of Barbarian Europe. However, it must be admitted that the impact of the Scandinavian model in the Younger and Late Roman Periods was lower than that of its Przeworsk Culture counterpart in the Early Roman Period.[147] The spread of specific solutions in the field of weaponry was facilitated by participation in common multi-ethnic military enterprises.

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[146] Kontny 2009, 101–03.

In the light of ancient authors' reports (with special reference to Tacitus) there were military retinues in the Germanic world in the Roman Period. They were commanded by chieftains and were relatively hierarchized. They, first of all, gathered male youths who were involved in plundering activity, sometimes very far from tribal borders. Such retinues often had a supra-tribal nature. There is no doubt that such retinues also existed among the Vandals. This is implied by a high number of graves with weaponry, or a specialization of military tactics and standardization of weaponry that can be clearly seen in Subphase B2b. This may have been a result of mass orders for weaponry manufacture that were completed as part of preparations for new expeditions.[148]

One should note that warbands could normally only reach a certain size. Logistical matters (e.g. food supplies for the warriors) were extremely important for gathering and sustaining an army. Thus, regular battles and mass-scale martial actions were extremely rare in so-called 'primitive warfare'.[149] Their weakness also lies in the lack of strategic planning beyond the first battle and tactical defects such as poor coordination of movements.[150] This does not concern raids and ambushes, which seem to be the most popular form of military activity.[151] Groups of a few to several dozen men (the equivalent of today's platoon or company) are very mobile and fast. Most of their combat involved raids intent on stealing horses, taking trophies, or avenging a previous affront.[152] One may link it with the fact that endangered people do not think of themselves as subordinate members of a formal military organization but as equals within a very tiny group: perhaps no more than six or seven, as was observed for the American soldiers during World War II.[153] This fits well the Roman Period Barbarians: it is evidenced by the reconstructed sizes of smaller units forming armies of northern Europe, but also from the relatively weak position of the military leader who was *primus inter pares*, as shown by Tacitus.[154] It was the commander who probably played a decisive role in dividing the spoils,[155] perhaps with an exception for duels — here, generally, the whole share was taken by the winner. Germanic warriors gained their income mostly from what they looted, not from permanent payments which induced them to repeat such actions again and again. The most desirable captures were horses, weapons, and jewellery, but also women.[156] Raids were executed by small groups of men, usually moving at night, therefore difficult to detect before they committed violence.[157]

These raids were undertaken across varying areas, although it is obvious that immense distances from the homeland made the invaders more secure, as this limited the possibility of revenge. Vengeance was important in the Germanic milieu, which is suggested by the phenomenon of blood money (Latin *poena capitis*) in the Germanic law.[158] This is probably what made the bonds between the retinue members so long-lasting, as described by Tacitus in *Germania*;[159] these bonds made them stand for one another after a successful raid to oppose possible retaliation by the kin of their victims.

Some of these military expeditions had a multi-ethnic character. This may be concluded from the opus of Tacitus, who noted that young warriors sought tribes which were waging a war to find an opportunity to fight for renowned military leaders from the outside.[160] One may even imagine that on some occasions warbands of homogenous ethnic composition were hired and paid by foreign leaders for particular purposes, like in the case of a Marcomannic noble Catualda, who 'bought' mercenaries among the Gothones to topple Maroboduus.[161] However, here we are probably dealing with actions which the Przeworsk Culture elites had to be aware of and accept; the more so that Vibilius, the leader of the Hermunduri, was involved in overthrowing Catualda, and — much later — also Vannius.[162] More permanent service to the leader was also proved — see the cavalry forces of the Sarmatian Iazyges who assisted Vannius, the king of Quadi, in his struggle against the invading Hermunduri led by Vibilius, Lugii, and other peoples (Tacitus, *Annales*, XII. 29–30).[163]

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[147] Kontny 2019d.

[148] Kontny 2003b, 253–67.

[149] Turney-High 1948. For the Barbarians of the Roman Period see, e.g. Goldsworthy 2017, 59.

[150] See Keeley 1996, 42.

[151] Keeley 1996, 65–66.

[152] Ethnographic parallels: Bleed and Scott 2011, 54.

[153] Keegan 1991, 36. On the basis of such premises, General Samuel Lyman Atwood Marshall, a historian of the European war theatre, argued for a new structure of small groups or 'fireteams' centred on a 'natural fighter'; his ideas were even put into practice (Keegan 1991, 56).

[154] See Tacitus, *Germania*, XIII–XIV; cf. Kolendo 2008, 124–25.

[155] Kuhn 1956, 4; Wenskus 1961, 355.

[156] Kontny 2003b, 254–56, with further literature. 'Raiding for wives' was a frequent feature of patrilocal and polygynous societies: Otterbein 2009, 22.

[157] Hence the role of animals having more acute senses — watchdogs or the Capitoline geese, see Keeley 1996, 46–47.

[158] Modzelewski 2004, 119–54.

[159] See Schlesinger 1953; Kuhn 1956; Kristensen 1983; Kontny 2003b, 265.

[160] Tacitus, *Germania*, XIV. 2; see Kristensen 1983, 31–32. Considering the development of a retinue institution, it is assumed that initially the warband was recruited from the local representatives, but at a certain stage they became open to foreign members thus achieving a multi-ethnic character; later on, structural and material dependency on the commander occurred — Steuer 1982, 52–54; Kontny 2003b, 256.

Assumptions referring to distant aims of attacks are not pure suppositions. This can be demonstrated by the narratives of ancient written sources and by (less unambiguous) archaeological data concerning the participation of tribes inhabiting the Przeworsk Culture territory in hostilities in Roman Period Europe.[164] It is believed that a horizon of destruction in the Púchov Culture settlements in northern Slovakia, which took place in the early first century AD, can be related to an invasion of the Przeworsk Culture population.[165] Another significant event was the fall of the state of Maroboduus in the territory of present-day Bohemia in AD 19. The reason behind it was an attack launched by Catualda, a man of noble birth who fled from the territory of Maroboduus's state. Catualda stayed with the Gutones (probably in Pomerania). He organized an armed detachment there and attacked Maroboduus. Catualda's march route perhaps went through the territory of the Przeworsk Culture. In this way Catualda's 'commando' caused the fall of Maroboduus and captured treasures that were gathered in the royal seat.[166] It is supposed that part of these spoils came to the territory of the Przeworsk Culture.

As mentioned, it is supposed that the Lugii (Lugian Federation) can be identified with the population of the Przeworsk Culture. It was the Lugii that were remembered in history for causing the fall of the state of Vannius, the ruler of the Quadi tribe in south-western Slovakia and southern Moravia. This occurred in AD 50, and the factor that attracted the invaders were riches gathered by the ruler.[167] Slightly later on, the Lugii were fighting the Suebi. In AD 93 the Romans joined these hostilities and sent a hundred cavalrymen to reinforce Lugian forces.[168] According to Cassius Dio, these events took place in Moesia, but in all probability they actually occurred to the north of Pannonia. Although these Roman troops could not have had a decisive military significance, they were perhaps a manifestation of support (cf. present-day endeavours for the presence of US troops in the eastern flank of NATO). The Romans also made use of these events for reconnaissance purposes.[169] It is assumed that the aim of Roman activities was to investigate the situation far away from the *limes*. This may have been related to Emperor Domitian's plans for military expansion to the north, as this ruler was waging wars with the Dacians at this time. Cassius Dio's narrative also demonstrated enormous activity on the part of the Lugii in the territory of the Carpathians at the end of the first century AD. It can be even supposed that the Lugian tribes living to the north of the Carpathians may have been indirectly involved in these activities as close allies.[170]

As mentioned, it was as early as Subphase B2b that Vandal warriors were migrating to the south-east. It cannot be determined whether this migration was of a military nature.[171] It is nevertheless certain that, as implied by the aforementioned narratives, they had an opportunity to prove their bravery in the Marcomannic Wars (AD 166–180). This was a chance to obtain enormous booty (what is very meaningful here are finds of mail armour and the apogee of the presence of swords in Przeworsk Culture graves that are dated to this period and to slightly later times, i.e. Phases B2/C1–C1a).[172] Furthermore, it was possible to learn about Roman ways of fighting and their armament, which was manifested, i.e. in changes of Germanic weapon forms (new types of swords, hemispherical shield bosses).

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[161] Tacitus, *Annales*, II. 62.

[162] Cf. Tacitus, *Annales*, II. 63; XII. 29. One should note that both the Hermunduri and Lugii came from moderately distant lands (the Hermunduri lived on the middle Elbe and Saale). The aforementioned cases show the possibility of a vast scale of barbarian military expeditions during that age.

[163] See Kontny 2019c, 161–66.

[164] Cf. Kolendo 1997, 14–15.

[165] Godłowski 1994b, 69–70.

[166] Tacitus, *Annales*, II. 62. For a comment see Kolendo and Płóciennik 2015, 112, 116–17.

[167] Tacitus, *Annales*, XII. 29–30. For a comment see Kolendo 2008, 119–20.

[168] Cassius Dio, *Historia romana*, LXVII. 12. 5; see Kolendo and Płóciennik 2015, 192.

[169] Godłowski 1994b, 68; cf. Kolendo and Płóciennik 2015, 193–94.

[170] Kolendo 1999, 227, 229–30.

[171] A report from the life of Marcus Aurelius in the *Scriptores historiae Augustae* (*Vita Marcii*, 14) concerning disturbances in the *limes* zone was considered a piece of evidence for internal Germanic conflicts. These disturbances were caused by peoples that were forced out of their seats by the Barbarians living further off to the north ('superiores barbari'). The authenticity of this narrative has recently been questioned. However, it cannot be denied that it correctly depicts the circumstances of this period. The Marcomannic Wars in 166/167–180 were a logical consequence of this situation, cf. Kontny 2005, 228–29.

[172] Of special significance here is a Roman sword from Starachowice, which was provided with a stamped mark bearing an 'IMP' inscription, viz. an abbreviation of '(officina) Imp(eratoris)'. This sword (Fig. 2.27:A) was manufactured in a state-owned workshop and it may have originally belonged to

The beginning of Phase C2 is a period of Barbarian invasions on the territory of the Roman Empire. It was not only the population from the Rhine and the Danube borderlands, but also tribes from distant regions of central Europe and even Scandinavia that participated in these events.[173] This is demonstrated by a report of Zosimus[174] on wars waged by Emperor Probus (AD 271–281) in Raetia against the Burgundians and the Vandals. A decisive battle took place in 279 upon the Ligus River (present-day Lech). Furthermore, there were hostilities with the Longiones (identified with the Lugii) upon the Rhine. The defeated Vandals were settled in Britain, but the Longiones were allowed to return to their homeland. These two campaigns witnessed the participation of various peoples inhabiting the territory of present-day Poland, and there is no doubt that Przeworsk Culture warriors were also present there.[175] The appearance of these communities in the western borderland of the Roman Empire is interpreted as proof that part of the Przeworsk Culture population left their hitherto seats in the second half, or even the last quarter, of the third century AD.[176]

The western direction was not the sole objective of migrations of the Przeworsk Culture tribes. Other communities of this culture may have taken part in conflicts that took place in the Danube territories (in Moesia and Thracia). The Vandal Asdingi were mentioned together with the Goths, the Taifals, the Carpi, and the Peucini as peoples who were attacking Moesia.[177] Bearing in mind the long distance from their homeland, this was in all probability a mobile retinue. Furthermore, it cannot be excluded that part of the Przeworsk Culture population migrated to the south. This was perhaps related to wars waged in the Danube territories (in Moesia and Thracia) by the Vandals allied with the Goths. The Vandals were invading Pannonia during the rule of Emperor Aurelian (AD 270–275) or were conquering Dacia, where they fought against the Goths.[178] The Vandals and the Goths invaded Pannonia in AD 270, but were successfully resisted by Emperor Aurelian.[179] According to the peace treaty, two thousand Vandal horsemen were to be sent to the Romans. A detachment of *ala VIII Vandiliorum* could be a trace of the presence of these horsemen in the Roman army. This unit was later evidenced in Egypt. The southern direction of the Vandal activity is also confirmed by wars waged by the Visigoths (Thervingi) against the Vandals (Hasdingi) in AD 290 and in AD 344. In the latter case, these fights were crowned with a victory upon the Marisia River (present-day Mureş).[180] In the discussed cases it is probably the Vandals-Hasdingi who previously left their homeland and settled upon the upper Tisza River. It must be stressed that a sparse number of surviving written sources for this period strongly limits our knowledge of these events.

A gradual depopulation of the Przeworsk Culture territory in the fourth century is perhaps related to putative migrations to the west and the south. The crossing of the Rhine near Mogontiacum (Mainz) by the Vandals allied with the Alans and the Suebi, on the last night of AD 406, and an invasion of the territory of Roman Gaul were a culmination of this process. This expedition must have been of extraordinary scope and have involved an extremely high number of Barbarians, as the decline of the Przeworsk Culture settlement is dated to this period. It is certain that the aforementioned narratives do not depict the entire scope of military events in which the Przeworsk Culture population was involved. This is not only a result of a limited number of written sources, but also of the fact that many internal conflicts between Barbarian tribes were not necessarily dealt with in ancient narratives.

On the other hand, the analysis of archaeological sources, apart from the aforementioned examples (especially those related to the Marcomannic Wars), also allows us to discover further traces of the Przeworsk Culture military activity in the south,[181] but also in the north. Characteristic garment parts or tools (e.g. bar-shaped strike-a-lights) that are found at bog offering sites in eastern Jutland and — in a particular manner — at Vimose in Funen (also containing single-edged swords, shield mounts, and spearheads)[182] as well as sporadic finds of shafted weapon heads of north European types

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a member of the praetorian guard. This unit was present in the borders of the Roman Empire in the course of the Marcomannic Wars, see Kolendo 1998b.

[173] Kolendo 1997, 15.

[174] Zosimus, *Historia nova*, I. 67–68.

[175] Łowmiański 1963, 242; Godłowski 1985a, 150.

[176] Godłowski 1985a, 150.

[177] Jordanes, *Getica*, XCI.

[178] Godłowski 1985a, 151–52.

[179] Zosimus, *Historia nova*, I. 48; see *Scriptores historiae Augustae, Divus Aurelianus*, 33.

[180] Jordanes, *Getica*, CXV.

[181] In the Crimean necropolis of Čatyr Dag there were warrior graves which were clearly 'alien' (foreign?) for the local cultural background. These graves were furnished with weapons and tools that were characteristic of various ethnic groups, that is, the Sarmatians, the Balts, inhabitants of Scandinavia, but also the population of the Przeworsk Culture. This can be interpreted as proof of existence of multi-ethnic retinues or detachments which formed in the course of Goth migrations to the south, see Kontny 2013b, 208.

[182] Also in this case it is possible to notice the participation of mixed Przeworsk Culture-Balt troops that were attacking northern countries, see Kontny 2019a.

in Przeworsk Culture graves, allow one to assume that individual warriors took part in wars waged in the territory of Scandinavia. Such expeditions brought fame to prominent warriors and, while they rather did not influence the general shape of the culture, there is no question that they accelerated an exchange of novelties in the field of weaponry and combat techniques.

The aforementioned observations imply the martial capabilities of Vandal warriors. It is not surprising that they were enlisted in the Roman army, as occurred after the Pannonian victory of Aurelian in AD 270. It cannot be excluded, however, that this was also taking place in a more systematic way. Such conclusions can be drawn on the basis of a very high number of imports of small Roman militaria (e.g. a gilded belt fitting that was an emblem of a Roman special task officer — *beneficiarius*, but also fittings of military belts and horse tack) that have been recently discovered in Cuiavia (Fig. 3.1). The number of such finds was especially high in the Gąski-Wierzbiczany settlement complex.[183] It demonstrates the presence of Roman soldiers in this region as early as the Early Roman Period. This presence was perhaps more intense in the mid-third century and then at the end of the Roman Period and at the beginning of the Migration Period, that is, in the fourth century. In this period the Roman army was strongly Barbarized. Is one therefore dealing with a testimony of Barbarian warriors' return to their homeland after military service in Rome? Or do these extraordinary finds demonstrate recruiting activity by the Romans among the Germanic peoples? This seems to be especially probable in the second half of the third century, when a self-proclaimed *Imperium Galliarum* existed in the west of Europe. It made use of Germanic detachments in its troops.[184] Answers to these questions can solely be brought by excavations. Therefore, we must simply be patient…

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[183] Kontny and Rudnicki 2020, figs 14.1:1, 4, 5; 14.2, 14.4:1–9, 11, 14.5:1–3.

[184] Kontny and Rudnicki 2020, 536–37.

CHAPTER 3

Weaponry in the Wielbark Culture

The population of the Wielbark Culture in the Early Roman Period occupied vast areas of northern Poland (Fig. 3.1). Since the Younger Roman Period, it also populated the territory of central and eastern parts of the country (right-bank Masovia, the region of Lublin, Podlachia with adjacent territories of current Belarus and Volhynia).[1] The people of this culture had an enormous impact on the cultural shape of the present-day territory of Poland in the first centuries AD. The popular view is that this culture should be linked with the Goths. However — as in the case of the Vandals and the Przeworsk Culture — the matter is more complex.

The first piece of information on the presence of the Goths on the southern coast of the Baltic Sea was perhaps given by Strabo in the 20s of the first century AD.[2] This author mentions a tribe of the Butones (Boutonoi) who were subjected to Maroboduus, the ruler of the Marcomanni. The name Butones is usually emendated as Goutonoi. Such a convergence is confirmed by the Tacitus's narrative concerning the fall of Maroboduus in AD 19.[3] The reason behind the fall of the ruler of said kingdom, centred in the Bohemian Basin, was the attack of the aforementioned noble Catualda. Having fled from his homeland, Catualda went to seek support from the 'Gotones', who inhabited territories beyond the land of the Lugii,[4] perhaps in Pomerania. The coup d'état carried out with the Goths' help was successful.[5] Maroboduus lost his power and Catualda acquired royal riches. However, he was only able to hold onto power for a brief period. Pliny the Elder in his *Natural History* (a kind of encyclopaedia of the ancient world, published in AD 77–79) mentions the 'Gutones' as one of the tribes belonging to the Vandili-Vandals,[6] perhaps in the north-eastern part of the Germanic world.[7] More details can be found in the *Germania* of Tacitus.

Around AD 98[8] the Roman historian wrote that the 'Gothones' were living behind the land of the Lugii, close to the Rugii and the Lemovii, who can be located somewhere in Pomerania to the west of the Vistula River.[9] On the other hand, Claudius Ptolemy situated the 'Gythones' on the eastern bank of the Lower Vistula,[10] on the basis of a source from the early second century. In this case, however, we are perhaps dealing with a repetition of an ancient stereotyped opinion which treated the Vistula as a border river, which does not reflect the actual cultural reality of this region.[11] In another place, Ptolemy mentions the people of the Rutiklioi, who lived somewhere between the Vistula and one of western Pomerania's rivers (perhaps the Odra).[12] There are convincing attempts at relating their name to the Rugii.[13] Yet another ethnos that can be located in the territory of the Wielbark Culture is the Gepids. Their presence in northern Poland is confirmed by a much later narrative of Jordanes from the mid-sixth century. This author summarized the history of the Ostrogothic royal family of the Amali. This history was recorded by the Roman intellectual Cassiodorus on the basis of, among other things, ancient oral tradition (*prisca carmina* songs). This report offers a precise location of Gepid seats on Gepedoios Island which was surrounded by the shallow waters of the Vistula.[14] This location can be identified with the Elbląg Heights,[15] which rise

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[1] The basic work concerning changes in the extent of the Wielbark Culture: Wołągiewicz 1981a; for a more recent approach see Cieśliński 2016, 224–28 fig. 8, with further reading.

[2] Strabo, *Geography*, VII. 1. 3; see Kolendo and Płóciennik 2015, 82.

[3] Kolendo and Płóciennik 2015, 92–93, 115–16.

[4] The Lugii are associated with the territory of the Przeworsk Culture, see Chapter 2.

[5] Tacitus, *Annales*, II. 62; see Kolendo and Płóciennik 2015, 112, 116–17.

[6] Pliny, *Naturalis historia*, IV. 99; see Kolendo and Płóciennik 2015, 131.

[7] Kolendo 2006, 21; Kolendo and Płóciennik 2015, 92–93, 115–16, 163.

[8] Tacitus, *Germania*, XLIV, see Kolendo and Płóciennik 2015, 208.

[9] Kolendo 2006, 22; Kolendo and Płóciennik 2015, 217–19.

[10] Claudius Ptolemy, *Geographike hyphegesis*, III. 5, 20; see Kolendo and Płóciennik 2015, 247.

[11] Cieśliński 2016, 230; cf. Kolendo 2009, 16–17.

[12] Claudius Ptolemy, *Geographike hyphegesis*, II. 11. 17.

[13] Kolendo 2006, 28–29; Kolendo and Płóciennik 2015, 261–62.

[14] Jordanes, *Getica*, XCVI.

[15] Okulicz-Kozaryn 1992, 140; cf. Kolendo 2009, 31.

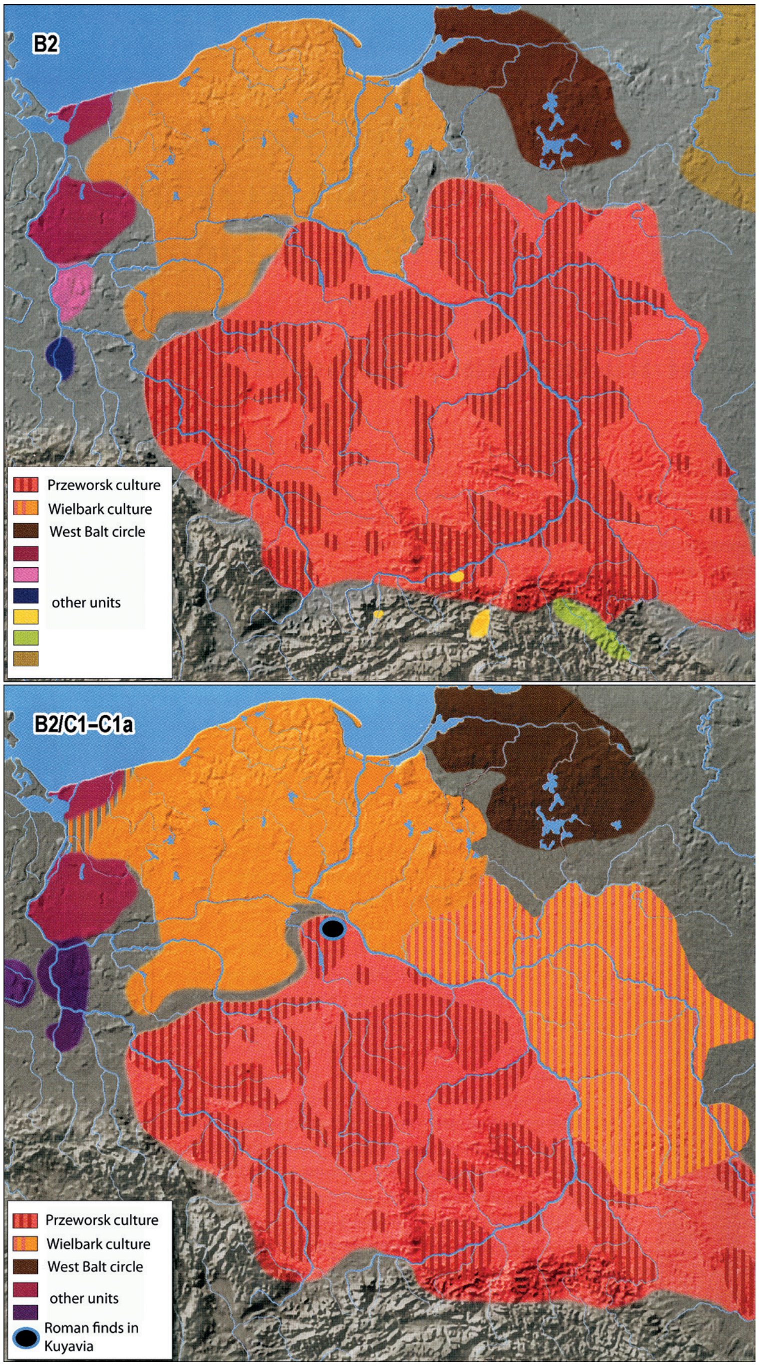

Figure 3.1. Major cultural units distinguished in Polish lands in phases B2 and B2/C1–C1a (after Kaczanowski and Kozłowski 1998, figs 144, 154 revised by Andrzejowski 2019, fig. 1 and the author).

dramatically above the waters of the Vistula Lagoon. In the discussed period the Vistula Lagoon was much more extensive than now (its vestige is the present-day Lake Drużno).[16] While summing up this data, it is necessary to notice a repetition of similar names referring to the Goths. It is also possible to point out other tribes: the Rugii, the Lemovii and the Gepids, and perhaps also other ethnic groups which were not mentioned in written sources.[17]

In written sources, the Goths are depicted as belligerent people. A legend that speaks of their arrival under the leadership of Berig from Scandza to Gothiscandza on the eastern coast of the Baltic in three ships[18] is obviously symbolic.[19] However, it seems to suggest that their migration was military in nature. Boats that were in use in this period were not provided with sails and were solely propelled by oars or paddles. Navigation in the Baltic (other than journeys along the coast or in calm bays) relied on strong crews composed of retinue members. This is demonstrated by discoveries of such vessels at bog sites.[20] The Goths evidently did not abandon their militaristic habits. Jordanes[21] says that after their arrival on the southern coast of the Baltic the Goths proceeded forward and defeated the maritime Ulmerugii and then the Vandals who lived further off. The Gothic migration to the south, to the land of Oium (which took place during the rule of Filimer, after a period of the reign of five kings),[22] was probably not very peaceful, either. The Wielbark Culture population's migration toward the Black Sea is recognizable in archaeological sources. This process is testified to by the change of this culture's territory, including the abandonment of Kashubia (Polish Kaszuby) and the Krajeńskie Lake District which are identified with Gothiscandza.[23] The analysis of the necropoleis demonstrates that their initial phases are represented by few graves. This gave grounds for a hypothesis about scouts (*exploratores*) who were investigating the territory before the appearance of the main wave of invaders.[24]

One of the traits of this process is also a very low share of men's graves in cemeteries located in the eastern zone of the Wielbark Culture. This was explained by the fact that the fair sex was privileged and it was even proposed that a 'state of the Amazons' existed in Masovia.[25] Some scholars were sceptical about this idea as it is inferred from insufficiently reliable archaeological and anthropological records. On the other hand, it seems to be based on sources which are undoubtedly attractive, but not very trustworthy from a historical point of view. Tadeusz Malinowski proposed that this was an expression of a certain burial rite, i.e. female burial grounds: while women's remains were buried in the earth, those of men left no archaeological traces.[26] However, a much more convincing explanation is the participation of Wielbark Culture warriors in military operations which accompanied the migration. It is actually not relevant whether they died in battle in the south, abandoned the idea of returning home, or decided not to come back due to other reasons. This perfectly explains the low proportion of men's graves in eastern cemeteries of the Wielbark Culture.[27] The military successes of the Goths were briefly summarized by Herwig Wolfram: 'they plunder and pillage and they disappear, burdened with booty'.[28] What can be attributed to the Goths are, among other things, expansions toward the Aegean Sea, the conquest of Crimea, seaborne invasions of the southern coasts of the Black Sea carried out with the use of a fleet captured from the Bosporan Kingdom, and eventually the death of Emperor Decius in the Battle of Abrittus in AD 251 — an event unprecedented in the history of the Empire.[29] This excellent run of good luck was first interrupted by the invasion of the Huns in AD 375 which caused the fall of the Ostrogoth state ruled by Hermanaric and initiated the Migration Period. However, the Goths continued to influence the course of history. Alaric I plundered Rome; there were also Visigoth states based in Toulouse, and later in Toledo. Furthermore, an Ostrogoth state existed in Italy.[30]

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[16] Kasprzycka 1999.

[17] Cieśliński 2016, 229–30.

[18] Jordanes, *Getica*, XXV; XCV.

[19] This was supposed to explain that the incomers belonged to one clan (the crew of one of the vessels, i.e. the Gepid tribe, was mentioned by name). The narrative about the ships is not historical in its nature, i.e. it does not concern a single event. On the other hand, it seems that it correctly depicts migrations of small groups of warriors, cf. Kolendo 2009, 34–35. See also the arrival of the Saxons in Britain in the fifth century in three ships upon the call of Vortigern — Gildas, *De excidio et conquestu Britanniae*, XXIII, Cf. also Yorke 2003, 2–3.

[20] Kontny 2012, 69–71; 2019e; 2023a, 107–20.

[21] Jordanes, *Getica*, XXVI.

[22] Jordanes, *Getica*, XXVII.

[23] Wołągiewicz 1986, 65–67.

[24] Bierbrauer 1994, 98–105.

It is, of course, inaccurate to speak of ethnically homogeneous communities. It was impossible to maintain uniformity in the circumstances of permanent migrations, where wandering communities were joined by groups of warriors from other tribes (a snowball effect). What is more, people from various tribes could easily communicate with one another, as differences between Germanic languages were in all probability much smaller than now. Reinhard Wenskus proposes the idea that ethnic identity was based on the core of tradition that was shaped by the leading group. A given community felt attached to this heritage and new members could also identify with it.[31] What was significant here was loyalty to the elite clans from which the rulers originated, such as the Ostrogoth Amali or the Visigoth Balti. This is even more comprehensible due to the existence of strong royal power among the Gotones, the Rugii, and the Lemovii, as stated by Tacitus.[32] There is no question that this power underwent verification in the course of migrations and a victorious king strongly consolidated his position. As can be seen, the Goths' history was irrevocably related to migrations.

There is a stark contrast between the military history of warlike Gothic peoples and an almost total absence of weaponry in archaeological sources in territories which are believed to have been settled by Gothic cultures,[33] first of all by the Wielbark Culture. This results from the fact that grave goods are the main source for learning about the Roman Period weaponry. In this case, however, iron can only occasionally be found in graves, both in cremation and inhumation ones (biritualism was in use in Gothic cultures). No matter whether this phenomenon can be explained by a ritual taboo or other reasons,[34] the result is the almost complete impossibility of drawing conclusions concerning weaponry on the basis of the archaeological record. Thus, does it make sense at all to undertake such an attempt? Of course! As said by the late Professor Jerzy Kolendo: 'One shall not take offence at archaeological sources.'

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[25] Kempisty 1968b, 160.

[26] Malinowski 1971, 179–81.

[27] On the other hand, the prevalence of women's graves in Wielbark Culture cemeteries is a more complex issue. A high rate of feminization is characteristic of a majority of necropoleis from various territories of the Wielbark Culture. Numerous explanations for this phenomenon are proposed. A significant fact cannot be omitted here: there is a striking disproportion between the number of women's and men's burials (in favour of the former) at the age of *juvenis* and *adultus*, that is, between the age of fifteen and thirty, see Skóra 2015, 17–18, 58–67 fig. 7 tables 17–18. A deficiency of graves of men who died in the period of the most intensive military activity seems to demonstrate that they were dying far away from their homeland. This anyway concerns not only the Wielbark Culture. A similar phenomenon (albeit not always so well pronounced) can also be seen in the Černâhov Culture, the Sântana de Mureş Culture, and in the Przeworsk Culture, as well as in West Germanic territories — Skóra 2015, 67 table 23.

[28] Wolfram 2003, 63.

[29] Wolfram 2003, 63–76.

[30] See e.g. Strzelczyk 1984, 127–255; Wolfram 2003, 143–234, 299–332; Heather 2010, 175–233; 2014, 17–124.

[31] Wenskus 1961; Wolfram 1996, 12–13, 16–17.

[32] Tacitus, *Germania*, XLIV.

[33] These cultures include — apart from the Wielbark Culture — the Černâhov Culture (in Ukraine) and the Sântana de Mureş Culture (in Moldova, Dobruja, Muntenia, and Transylvania), as well as the minor Masłomęcz Group (in the Hrubieszów Basin).

[34] On funeral rites in the Wielbark Culture see e.g. Wołągiewicz 1981b, 151–52; Jaskanis and Okulicz 1981, 180–81; Gałęzowska 2007, 166–80. For analyses of iron artefacts in graves of the Wielbark Culture and the Masłomęcz Group see Gładysz 1997, 35–88, cf. Woińska 2015.

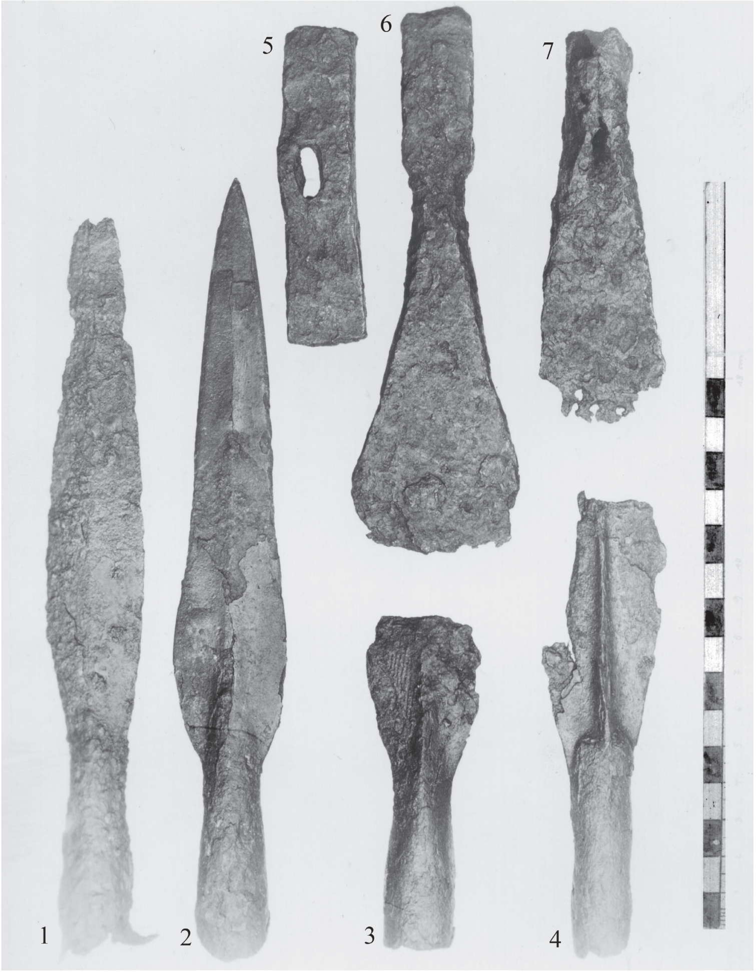

Figure 3.2. Find from Żarnowiec (after Jahn's heritage).

Finds of weapons are, in fact, exceptional in Wielbark Culture burials; however, they are recorded in necropoleis specifically in the culture's earliest phase. This is related to a long duration of earlier traditions associated with the Oksywie Culture, on whose basis the Wielbark Culture formed. Przeworsk Culture customs having endured in territories later occupied by the Wielbark Culture population may have been another factor. Furthermore, there is a small assemblage of weaponry finds with no clear context of discovery from the discussed territory. Wielbark Culture traces were also searched for in putative impacts on neighbouring cultural units, with special reference to the Przeworsk Culture and its eastern zone.[35] Furthermore, not only an extremely significant discovery from Żarnowiec, but also small non-ferrous finds of weaponry and spurs must be taken into consideration. Let us, therefore, discuss all relevant finds by categories.

Polearms

A very important group of finds comes from a possibly unique bog offering site in Żarnowiec, Puck District (Fig. 3.2).[36] What was found there was a shafted weapon head of Type III//IV according to Kaczanowski or Type 3 according to Ilkjær.[37] This artefact can perhaps be dated to the Early Roman Period (Fig. 3.2:1). Other finds included a Scandinavian Skiolum type shafted weapon head (Type 16 according to Ilkjær) from Subphase C1b (Fig. 3.2:2), a shafted weapon head decorated with a stitched ornament belonging to the Scandinavian Type Hunn (Ilkjær 22) or the Przeworsk Culture Type Kaczanowski II.1 from Phases B2–C1a (Fig. 3.2:3), as well as an artefact of the Przeworsk Culture Type Kaczanowski I.1 from the Early Roman Period (Fig. 3.2:4).[38]

A shafted weapon head with a rhombic cross-section was found in Sławianowo, Złotów District,[39] but its chronological relationship with an Early Roman Period inhumation grave from the same locality is dubious.[40] In spite of this, the archive of Martin Jahn[41] actually contains a sketch of a 36 cm long artefact. Its socket is 7 cm long and its blade is 5 cm wide. This find is to be classified as Type Kaczanowski XV, generally dated to Subphase C1a, or sporadically also to Subphase B2b (Fig. 3.3:1).[42] Yet another example is known from Lekowo (former Leckow), Świdwin District, from the cremation Grave 1[43] dated to Phase B1 (containing, among other things,

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[35] This method was applied in the first — and so far the only — comprehensive work on Wielbark Culture weaponry, see Kaczanowski and Zaborowski 1988.

[36] On the history of discovery and interpretation of this site see Kontny 2006, 143–45, 151–52.

[37] Kaczanowski 1995; Ilkjær 1990.

[38] Kontny 2006, 145–48. While dating the artefacts after Kaczanowski and Ilkjær, it is assumed that the chronology of individual types was identical in the Wielbark Culture and in the neighbouring territories. Such an assumption might be disproved in the future. On the other hand, at present, there are no grounds for verification of chronology (Wielbark Culture finds are deprived of any dating context).

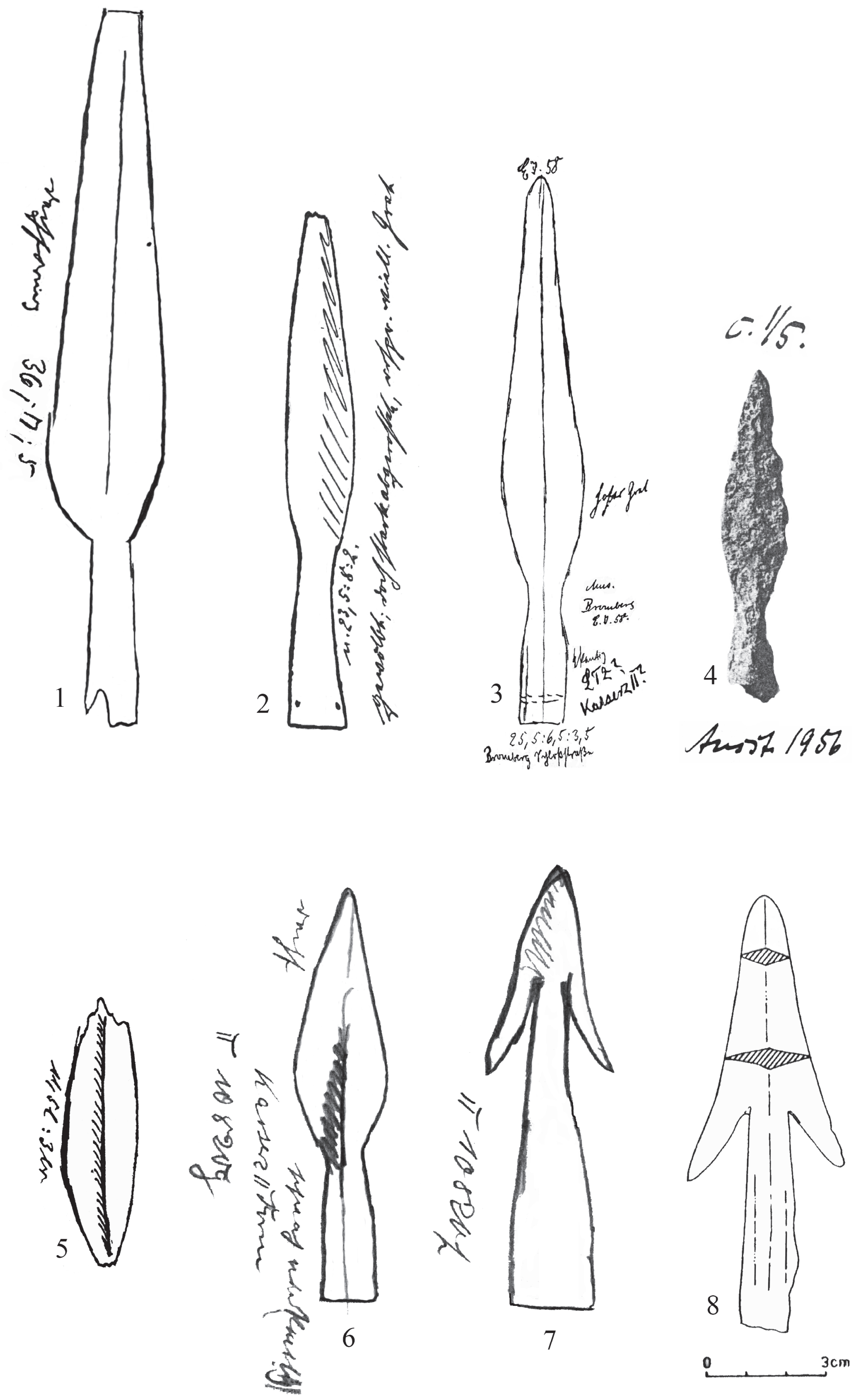
[39] *Amtlicher* … 1907, 26; Jahn 1916, 254–55; Kaczanowski and Zaborowski 1988, 223–24; Kokowski 2006, 130.

[40] Gałęzowska 2007, 175, 208.

[41] Jahn's heritage (also: Jahn's archive or Jahn's files). It is an extremely important archival source for studies of La Tène, Pre-Roman, and Roman Period weapons lost in World War II. This scholar made extensive documentation during his museum queries and left numerous descriptions and drawings from various European collections, as he was one of the best specialists in the field of proto-historic weapons.

[42] Kaczanowski 1995, 23.

[43] Eggers 1937, 137–39; Eggers and Stary 2001, 120–21 pls 320–21.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3cm

Figure 3.3. Shafted weapon heads from the territory of the Wielbark Culture. 1 — Sławianowo, 2 — Rusinowo, 3 — Bydgoszcz, 4 — Wronki, 5 — ex-Woedke/Wödtke near Lębork, 6–8 — Piła (1–7: after Jahn's heritage, 8 — after Kaczanowski and Zaborowski 1988, fig. 3).

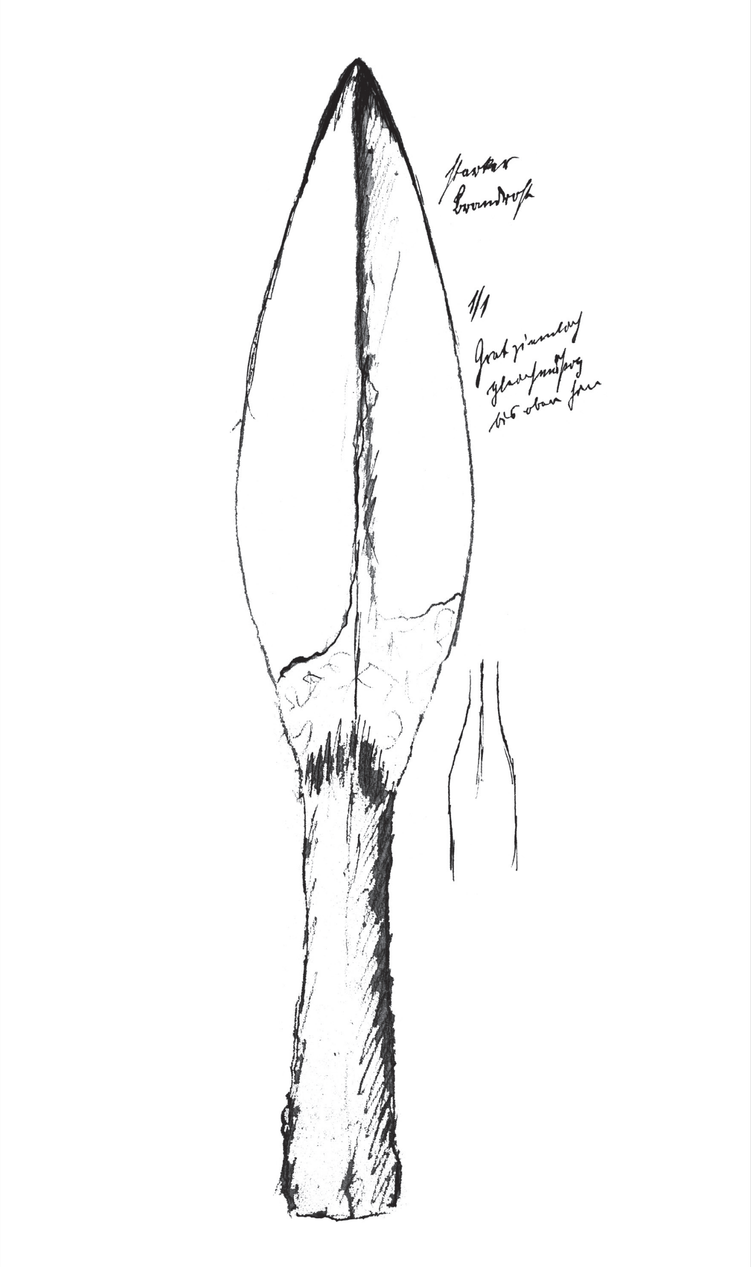
starker Brandrost
1/1
Grat ziemlich gleichmäßig bis oben hin

Figure 3.4. Shafted weapon head from Chludowo (after Jahn's heritage).

Almgren 45 fibulae).[44] This shafted weapon head is too corroded to assess its type, but it seems to be closer to Przeworsk Culture than to Scandinavian forms. It resembles the Early Roman Period artefact of Type Kaczanowski III/IV from Żarnowiec (it is only slightly longer, as it measures 26 cm). Moreover, a cremation urn grave from Prusinowo (former Prütznow), Łobez District, yielded a piece of another shafted weapon head — a socket fragment. On the basis of the presence of a chair-shaped spur and a fragment of a Jahn 6 shield boss this find can be dated to the late part of Phase B1.[45] A find ascribed to Type M/6 according to Piotr Łuczkiewicz from Grave 176 in Chełmno, Chełmno District can be classified as a post-Oksywie Culture artefact; it is dated to Phase B1.[46] Such shafted weapon heads are known both in the Oksywie Culture and in the Przeworsk Culture.[47]

An unornamented find from Bydgoszcz[48] and an inlaid artefact from Smukała[49] (now within the Bydgoszcz municipality) are also mentioned in the literature. They come from the territory which was settled by the Wielbark Culture peoples in the Roman Period and were previously dated to Phases B2–C1.[50] At present, the first artefact is classified as Type Kaczanowski XV and can be related to Subphase C1a.[51] The chronology of the other find can be assessed as above solely on the ornament type, as the artefact itself was lost. A stray find of a shafted weapon head of Type I.4/II.1 according to Kaczanowski was also found in Bydgoszcz (former Bromberg Schloßstraße). It can be roughly dated to Phase B1[52] and it was recorded in a quite detailed sketch (Fig. 3.3:3)[53] in the archive of Martin Jahn. On the other hand, a shafted weapon head from Poznań-Szeląg[54] was classified as a Wielbark Culture artefact.[55] It belongs to Type Kaczanowski XXIII and can be related to the Przeworsk Culture phase of use of this necropolis, i.e. Phases C1b–C2.[56]

Kaczanowski and Zaborowski also mention — after the archive of Martin Jahn — a number of finds, including a shafted weapon head that was hauled up from the Warta River in the locality of Radziń near Poznań. This artefact was perhaps identified on the basis of said Jahn's records.[57] The locality's name was actually

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[44] Almgren 1897.

[45] Kunkel 1940, 326 n. 170; Wołągiewiczowie 1964, 117 pl. II:5; Eggers and Stary 2001, 117 pl. 303:8.

[46] Łuczkiewicz 2006, 334 fig. 45:7; Łęga 1938, 47–48 pl. XII:5.

[47] Łuczkiewicz 2006, map 27.

[48] Potemski 1963, 74–75 pl. XX:4; Kaczanowski 1988, 54.

[49] Potemski 1963, 124.

[50] Kaczanowski 1988, 53–54, 72; Kaczanowski and Zaborowski 1988, 225.

[51] Association with Subphase B2b is much less probable, and with Subphase C1b — almost impossible, see Kaczanowski 1995, 23 pl. XX.

[52] Kaczanowski 1995, 15.

[53] Jahn's heritage. This sketch misses certain details, but handwritten notes suggest that the cross-section of the artefact's socket was rectangular ('4 kantig') and the blade was provided with a high rib ('hoher Grat'). The find's dimensions were the following: total length 26.5 cm, socket length 6.5 cm, and blade width 3.5 cm.

[54] Erzepki and Kostrzewski 1915, pl. LXVI:35.

[55] Kaczanowski and Zaborowski 1988, 225.

[56] Gałęzowska 2007, 163, 203; cf. Kaczanowski 1995, 26–27.

[57] Kaczanowski and Zaborowski 1988, 225.

Radzim, Oborniki District — this artefact is believed to have been stored in the collection of the Museum für Vorgeschichte in Berlin (inv. no. Id2102). On the basis of a photo in the inventory card in Jahn's files, it can be classified as Type I.3 according to Kaczanowski and dated to the Early Roman Phase, perhaps excluding its earliest part.[58] It proved impossible to verify a mention concerning a barbed shafted weapon head dated to Phases B2–C1a[59] (a relevant record was in all probability lost). Other shafted weapon heads which were recorded there were supposed to come from Chludowo, Poznań District — previously in the museum in Wschowa, German Fraustadt (Fig. 3.4), and from Wronki, Szamotuły District (Fig. 3.3:4). The former can be classified as being close to Type Kaczanowski VI.2[60] and it can be dated to Subphase B2b. On the other hand, the identification of the latter provokes serious doubts.[61] Kaczanowski and Zaborowski also mention a later published find from Borowo, Chodzież District (Fig. 3.5:1).[62] Due to the location of this find to the south of the Noteć River, its cultural pertinence must be reconsidered. It should be classified as the Scandinavian Type Dörby (Ilkjær 29) which is also known from Finland. The find can be dated to Phase C2 or even to the beginning of Phase C3.[63] In this period, the region was a borderland and thus it is difficult to unambiguously define the cultural attribution of local finds.[64]

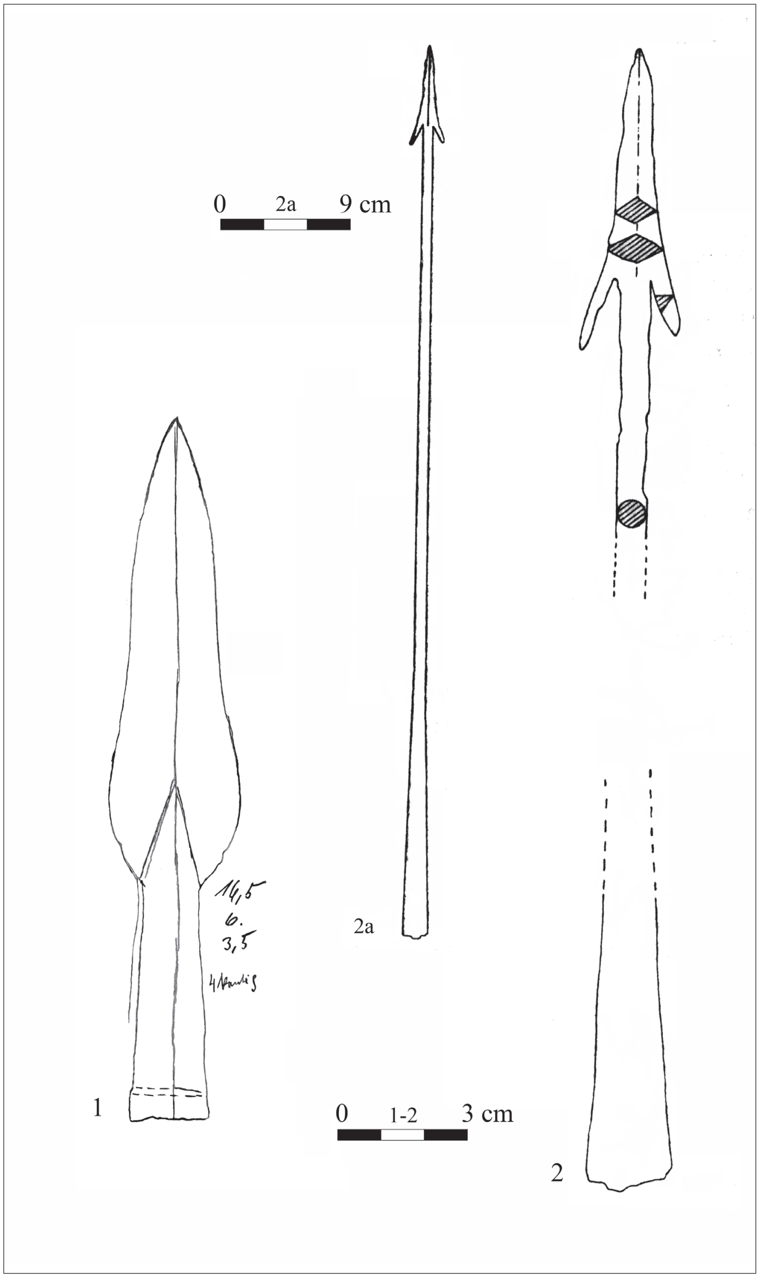

Figure 3.5. Scandinavian forms of shafted weapon heads from the territory of the Wielbark Culture. 1 — Borowo, 2 — Mława (1 — after Jahn's heritage; 2 — after Kaczanowski and Zaborowski 1988, fig. 7).

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[58] Cf. Kaczanowski 1995, 12–13. Jahn's files give the following dimensions: total length 25.5 cm, socket length 6 cm, blade width 4 cm. Martin Jahn also recorded that the artefact was 'fast flach', which implies a feebly pronounced rib (which is uncommon for this type). This, however, can be explained by very advanced corrosion.

[59] Kaczanowski and Zaborowski 1988, 225.

[60] The midrib is feebly pronounced, and it is even throughout its entire length ('Grat ziemlich gleichförmig bis oben'), which is not quite characteristic of Type VI (see Fig. 2.8: upper left corner). What is more, the maximum blade width is also considerable. This is why this artefact is rather close to Variant IX.2, which is dated to the Early Roman Period, cf. Kaczanowski 1995, 17–18, 20.

[61] This find was acquired in the course of construction works. Its sole depiction is a small photograph in Jahn's files, which demonstrates strong corrosion covering the artefact. The dimensions in centimetres were also given ('18,5: 4,5: 3,5') and it was stated that the find was handed over by a post office head in Poznań named Kühn. Furthermore, a flat roof-shaped blade of the artefact was mentioned ('eis. Lanzenspitze mit flach-dachförmig Blatt'). The Roman Period chronology was provided with a question mark ('Kaiserzeit?') by the German researcher. Therefore, it is difficult to consider this find as clearly identified and relate it to the Wielbark Culture.

[62] Kaczanowski and Zaborowski 1988, 225; Kostrzewski 1923, 203 fig. 735. In Jahn's files there is a sketch and mentions of the rectangular cross-section of the socket ('4 kantig' and 'vierkant. Tülle') and of fire patina ('1 Lanzenspitze m. Feuerpatina'). This implies that the artefact came from a cremation grave. Furthermore, the find's dimensions are stated: 16.5 cm × 6 cm × 3.5 cm.

[63] Ilkjær 1990, 142 fig. 197.

[64] Godłowski 1985a, map 6. In the discussed period one would rather be dealing with a borderland of the Dębczyno Group and the Przeworsk Culture.

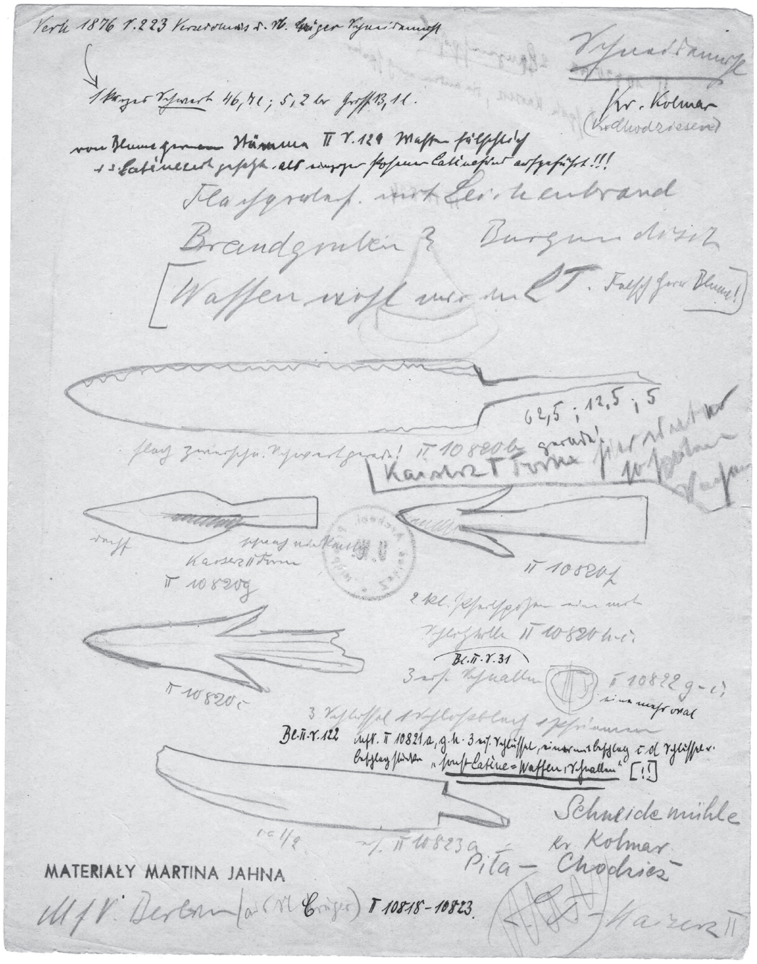
Kr. Kolmar
Flachgräberf. mit Leichenbrand
Brandgruben? Burgundisch
62,5 ; 12,5 ; 5
II 10 820 b
II 10820f
II 10820g
II 10820c
Bl. II. V. 31
II 10822 g–i
Bl. II. V. 122
II 10821 a, g, h
„Spät-Latène-Waffen, Schnallen“ [!]
ca 1/2
II 10823 a
Schneidemühle
Kr. Kolmar
Piła – Chodzież
MATERIAŁY MARTINA JAHNA
II 10818–10823.
Kaiserz. II

Figure 3.6. Card from Jahn's archive, concerning the finds from Piła (after Jahn's heritage).

A number of finds are known from Piła (former Schneidemühl). In Jahn's files there is a card concerning this site (Fig. 3.6).[65] This scholar remarked that Erich Blume[66] had erroneously classified all local weaponry finds as La Tène Period artefacts. In fact, a series of Roman Period weapons was discovered there. One of the barbed shafted weapon heads survived in a Berlin collection (inv. no. II 108 20e)[67] and was published.[68] It can be classified as Type Kaczanowski A and dated to Phase B1, or possibly the beginning of Phase B2 (Fig. 3.3:8).[69] Jahn's legacy also contains raw sketches of yet another barbed shafted weapon head (inv. no. II 10 820f), possibly of Type G from Phase B2, or maybe from the beginning of the Younger Roman Period (Fig. 3.3:7).[70] There is also a shafted weapon with no barbs (inv. no. II 10 820 g). It may belong to Type II and can be dated to the Early Roman Period or Subphase C1a (Fig. 3.3:6).[71] What is more, in Jahn's files there is also a mention of two shafted weapon heads. One of these is dated to the Late Roman Period and the other is even later.[72] Regrettably, there are no drawings of these artefacts which would allow for verification of this chronology.

The locality of Podomin in the vicinity of Piła was believed to have yielded a shafted weapon head dated to Phases B2–C1a.[73] This piece of information may have come from Jahn's archive, but obviously it must be verified. In fact, the locality in question was Podanin, Chodzież District, as was recorded on the surviving archive card (Fig. 3.7). It also contains a mention of a La Tène Period sword, and — most importantly — data concerning a flat urn necropolis where remains of urns, bones, and iron shafted weapon heads were found. One of these artefacts was 32 cm long. Yet another find was a scissors-like artefact.[74] Due to the considerable length of the aforementioned pole weapon head, it was most probably a find dating to the Roman Period. It may have been an Early Roman Period Przeworsk Culture weapon, or a Scandinavian artefact from the Younger Roman Period (of Type Simris, Skiaker, Skuttunge, Lundskin, Einang, or Foss).[75] These, however, are merely suppositions, as the shape of this weapon is unknown.

Jahn's archive contains a few more mentions of shafted weapon heads. It is worth discussing their possible relationship to the Wielbark Culture. The find place of the first of these was recorded as Woedke or Wodtke, Kr. Lauenburg (Fig. 3.3:5). This artefact was supposedly discovered with no context, but next to an urn. There is no doubt that this find comes from the vicinity of present-day Lębork, but the identification of the name Woedke/Wödtke is not obvious. It is possible that this name does not refer to a locality, but is the family name of the donor:[76] the surname was widespread in Pomerania. The name may also refer to an estate of this family. The latter supposition receives support from the fact that an estate of the noble Wödtke family was possibly situated two miles to the north-east of present-day Lębork.[77] This artefact was mentioned twice in the nineteenth-century publications: as a bent shafted weapon head[78] or as a fragment of an iron buckle.[79] The files contain a sketch where a blade with a pronounced rib can be seen. Furthermore, dimensions of the surviving length and width of the blade in centimetres were given ('11,5 l.: 3 br'). Jahn acknowledged the opinion of Kühne, but believed that the artefact was a shafted weapon head. On the basis of the pronounced rib and the shape of the blade it can be supposed that the artefact belonged to Type I or II according to Kaczanowski. Such weapons generally occur in Phase B.[80] However, this identification is not certain, due to incomplete documentation of the find. Two stray finds of shafted weapon heads that were discovered in 1898 and 1901 in Radzyń Chełmiński (former Rehden), Grudziądz District, were termed by Martin Jahn as 'LTZeit'. Thus, they may have been related to the Oksywie Culture. The find from Rusinowo (former Rützenhagen), Sławno District is drawn in a careless manner (Fig. 3.3:2). As it was believed to be strongly corroded and bent (it may have come from a cremation cemetery), it is difficult to assess whether one is dealing with a Pre-Roman Period (Oksywie Culture) or a Roman Period (Wielbark Culture) artefact.

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[65] It was believed to be a flat cremation burial ground, possibly with pit graves. It was defined by Martin Jahn as 'Burgundian' (with original versification):
'Flachgräberf. mit Leichenbrand
Brandgruben? Burgundisch.'

[66] Blume 1915, 122.

[67] Jahn recorded it as: 'II 10 820i'.

[68] Kaczanowski and Zaborowski 1988, 224 fig. 3.

[69] Kaczanowski 1995, 29. With regard to its morphology, the discussed find corresponds to Variant A.2 (no ring on the socket), and concerning its size it can be classified as A.1.

[70] Kaczanowski 1995, 32.

[71] Kaczanowski 1995, 14–15.

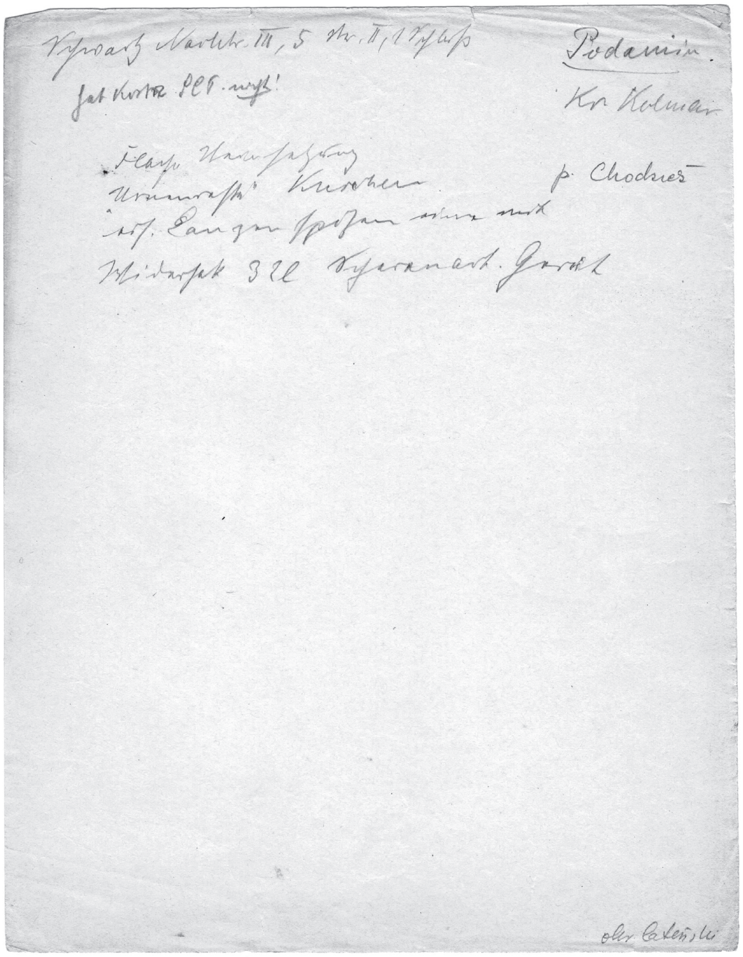
[72] The record is the following (with original versification and underlining):
'II 10 820 c+d 2 Lanzenspiten
1 späte Kaiserzeit, die anderen noch später.'

[73] Kaczanowski and Zaborowski 1988, 225 n. 1.

[74] Jahn's heritage, Podanin Card, Kr. Kolmar:
'"Urnenereste" Knochen
Eis. Lanzenspitzen eine mit
Widerhaken 32l Scherenart. Gerät.'

[75] Cf. Kaczanowski 1995, table 2; Ilkjær 1990, 187, 210, 223 fig. 198. In the Late Pre-Roman Period barbed shafted weapon heads are quite rare, and long artefacts are exceptional. The latter belong to Group ZM according to Łuczkiewicz. In this group, only a shafted weapon head from Otłoczyn, Aleksandrów Kujawski District is of nearly the same length as the artefact from Podanin — Łuczkiewicz 2006, 140, 314 fig. 48:4, with further reading.

An iron artefact that was discovered in the course of exploration of timber tracts going through flood terrains in Bągart, Sztum District, was classified as a Wielbark Culture shafted weapon head. These pathways are believed to have been related to the Wielbark Culture. This artefact was stuck into one of the planks of 'Pier II' on Level 1. These planks were dendrochronologically dated to the beginning of the second century (two dates were obtained: about 102 and 117).[81] What is surprising, however, is an unusual cross-section of the very thick 'blade'. The cross-section is lenticular on one side and there is a rib on the other side. First of all, however, the part below the 'blade' is solid and thus it could not be used as a socket. Therefore, this artefact is certainly not part of a shafted weapon.[82]


Podanin.

Kr. Kolmar

p. Chodzież

Figure 3.7. Card from Jahn's archive, concerning the finds from Podanin (after Jahn's heritage).

Yet another find that has recently been classified as a Wielbark Culture pole weapon head is a stray find of an undoubted shafted weapon head from the necropolis of the Przeworsk Culture and the Wielbark Culture in Modła, Mława District. It was assumed that the find belonged to Type Kaczanowski XVIII and that it can be dated to the period of the cemetery's use by Wielbark Culture population or, to be more precise, Subphase

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[76] The name is of Slavic origin and it stands for a person living on the water/close to water.

[77] Fabri 1793, 629.

[78] 'Erwerbung des antiquarischen Museums', 309.

[79] Kühne 1883, 351.

[80] Kaczanowski 1995, 11–15.

[81] Sadowska-Topór 1999, 83 fig. 45.

[82] I am indebted to Dr Maria Kasprzycka, former Director of the Archaeological-Historical Museum in Elbląg and to Grzegorz Stasiełowicz, MA from this museum for the opportunity to study this artefact.

C1a.[83] Such a classification, however, provokes doubts, as the socket of the artefact is too long and its blade is too narrow. It seems more justified to classify the find as Type Kaczanowski V.3. As such, it could be related to the Early Roman Period (that is, Przeworsk Culture) stage of use of the necropolis.[84] Incidental examples of survival of the Przeworsk Culture custom of furnishing graves with weaponry in territories that were previously occupied by the eastern zone of said culture's population are known from the Wielbark Culture. However, they concern a shorter chronological perspective — soon after the cultural change, i.e. in Phase B2/C1–C1a. Grave 37 in Drozdowo, Łomża District, Site 5 yielded two shafted weapon heads of Type Kaczanowski XV. In this case, they are dated to the late part of Subphase C1a on the basis of finds of a shield boss with a short, powerful spike[85] and a crossbow-shaped tendril fibula. Furthermore, a short shafted weapon head of Type Kaczanowski V/XVII was found in Grave 76. The assemblage also included a typical Wielbark Culture vessel decorated with negative ornament, a shield boss with a very small spike, and a shield grip with indistinct rivet plates. The aforementioned features are cremation graves, but a shafted weapon head of Przeworsk Culture Type Kaczanowski II.1 was also found in Grave 77. This was an inhumation grave, that is, it was characteristic of Wielbark Culture rites.[86]

Another interesting weapon grave from the territory of the eastern part of the Wielbark Culture, which expresses former post-Przeworsk Culture traditions, comes from the Wielbark Culture necropolis at Wyszomierz Wielki, Zambrów District, Feature 110.[87] It was furnished with, e.g. a spearhead, a javelin barbed head, a blunt-apex shield boss (Type Jahn 7a), a shield grip (Type Zieling V2), and a pair of spurs (Type Ginalski E6/7), all dated to Phase B1/C1–C1a. In contrast to the published identification, the spearhead does not fit the Scandinavian standard and should be rather identified as an artefact close to Type XVI after Kaczanowski.[88] However, the barbs of the javelin head are much more characteristic of the Scandinavian forms than the Przeworsk Culture artefacts, so one may imagine some sort of northern inspiration and attribute it to Type Simris/Ilkjær 8. This does not contradict the chronology of the feature.[89] Most probably we are dealing with a relic of the settlement of the Przeworsk Culture replaced by people of the Wielbark Culture. As the other graves clearly represent the latter cultural unit, it seems probable that it is a rare case of a Gothic warrior who was buried with a weapon.

The shafted weapon head from Mława, Mława District, is also of considerable interest (Fig. 3.5:2). Regrettably, it is deprived of any context. Although it provokes associations with a Roman *pilum* or Frankish *ango*, it actually has Scandinavian analogies.[90] It should be classified as Skuttunge type (Ilkjær 3), which differs from similar Scandinavian artefacts with a feebly pronounced point. This type is dated to Phase C2 and it occurs in the territory of Norway, Sweden, Denmark, and sporadically in Germany.[91]

In this place it is worth making reference to an assumption proposed by Kaczanowski and Zaborowski. According to it, the ornament of negative triangles which can be chiefly found on shafted weapon heads from the eastern zone of the Przeworsk Culture that was intensively infiltrated by Wielbark Culture influence, was indirect evidence that pole weapon heads of this kind were in use in the latter culture. Such ornament is very characteristic of the Wielbark Culture and it is clearly evidenced on ceramic vessels.[92] However, in the light of more recent findings this assumption cannot be maintained any longer. Such shafted weapon heads are a strongly diversified group, and they occur in a larger area than was previously believed. A significant number of such artefacts are known from the western zone of the Przeworsk Culture and they were also recorded in the West Balt Circle (Fig. 3.8). However, a Wielbark Culture provenance of such shafted weapon heads is first of all disproved by the fact that finds decorated with negative ornaments are mainly known in Subphase B2b, i.e. before the spread of the triangular pattern on Wielbark Culture vessels.[93]

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[83] Andrzejowski 2006, 19, 26 fig. 17:LZ.2.

[84] Cf. Kaczanowski 1995, 17.

[85] Godłowski 1994a, fig. 1.

[86] Personal communication, Dr Habil. Jacek Andrzejowski from the State Archaeological Museum in Warsaw, to whom I am indebted. This data was also discussed by Jacek Andrzejowski in a paper 'Goth's Way through Eastern Poland – Archaeological Evidence' delivered to the 65th Sachsensymposium conference (Interacting Barbarians: Contacts, Exchange and Migrations in the First Millennium AD: 65. International Sachsensymposion) on 15 September 2014 in Warsaw (for publication see Andrzejowski 2019).

[87] Rakowski 2020, 322, 328 figs 5–8.

[88] See Kaczanowski 1995, 23–24 pl. XIII:3–4. What can be a good parallel from the Przeworsk Culture is a stray find from a necropolis at Kalinów, Strzelce Opolskie District, Site 2 — Jahn 1919, 94 fig. 10; in the collection of the Museum of Archaeology — Wrocław City Museum, inv. no MAW/III/875, former no. 47:82 (I would like to thank Krzysztof Demidziuk for an opportunity to study the material from the aforementioned museum).

[89] See Ilkjær 1990, 187, 197–98 fig. 198.

[90] Kaczanowski and Zaborowski 1988, 230–31 fig. 7.

[91] Ilkjær 1990, 223 figs 161, 162, 198.

[92] Kaczanowski and Zaborowski 1988, 235–36 fig. 9.

[93] Kontny 2017a, 195–99 figs 2–3.

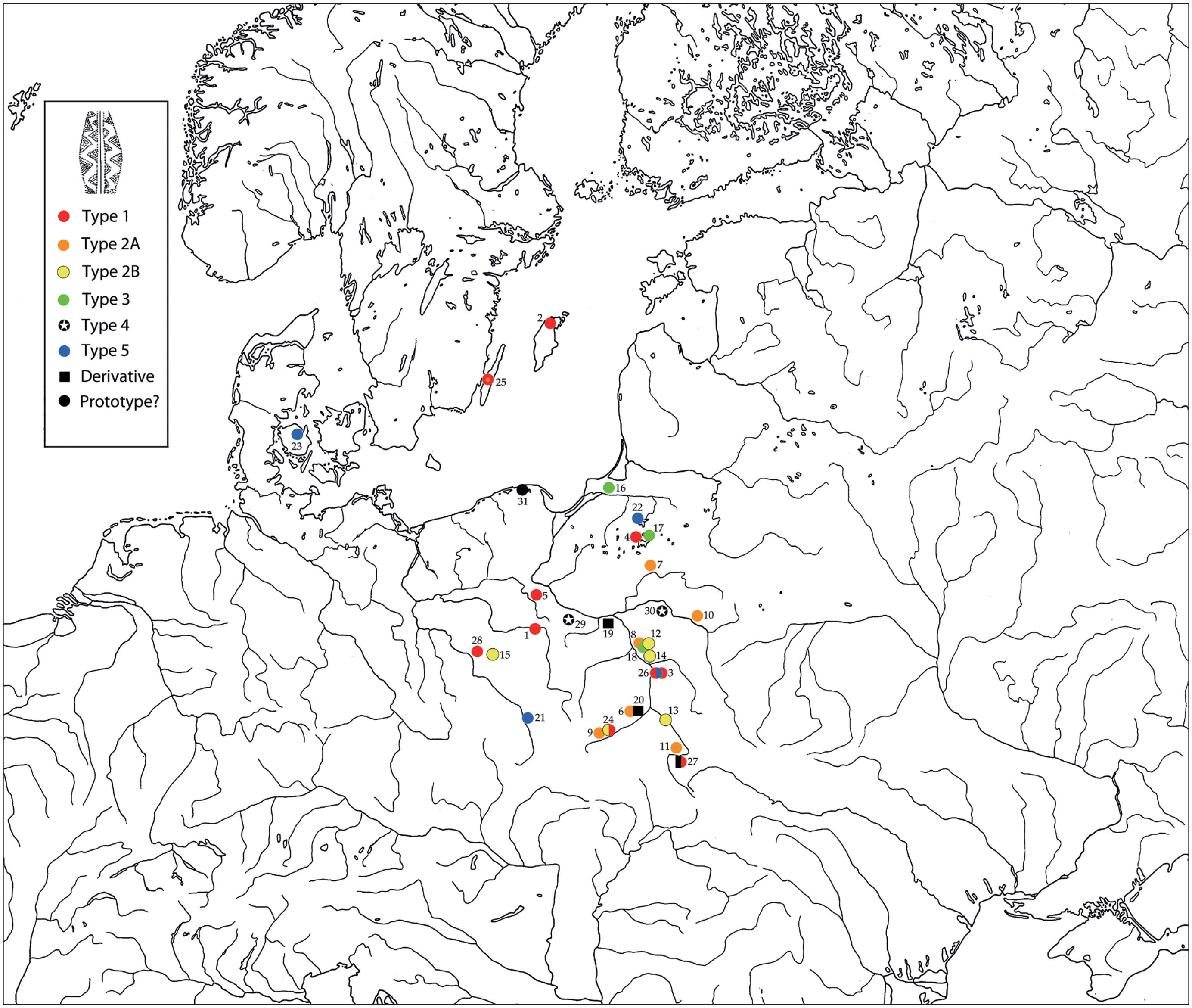

Figure 3.8. Distribution map of shafted weapon heads decorated with negative ornament and their derivates (after Kontny 2017a, fig. 3, with site numbers).

An interesting discovery was made at the settlement in Lipianki, Kwidzyn District, where three shafted weapon heads made from bone or antler were found (Fig. 3.9). One of these originated from the Oksywie Culture settlement phase, but the artefact from Feature 913 was uncovered in a Wielbark Culture dwelling. There was also a stray find whose cultural identification is not obvious.[94] Shafted weapon heads of this kind were often in use in the Bronze Age and the Early Iron Age. In Scandinavia, such artefacts were also known in the Early Roman Period.[95] In the Przeworsk Culture such finds have not been discovered so far in a Roman Period context. Although they do appear in the Late Pre-Roman Period, they do so only sporadically.[96] Therefore, in this case one is rather dealing with some sort of inspiration from the north or with a survival of old traditions.

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[94] Strobin 2015, 136 figs 31:2, 40:6.

[95] Kontny 1996, 149–54; cf. Martens 2001, 143–47 figs 11–14.

[96] Cf. a find from the settlement in Otorowo, Szamotuły District — Żychliński 2003; see also critical remarks in Bochnak 2005, 73.

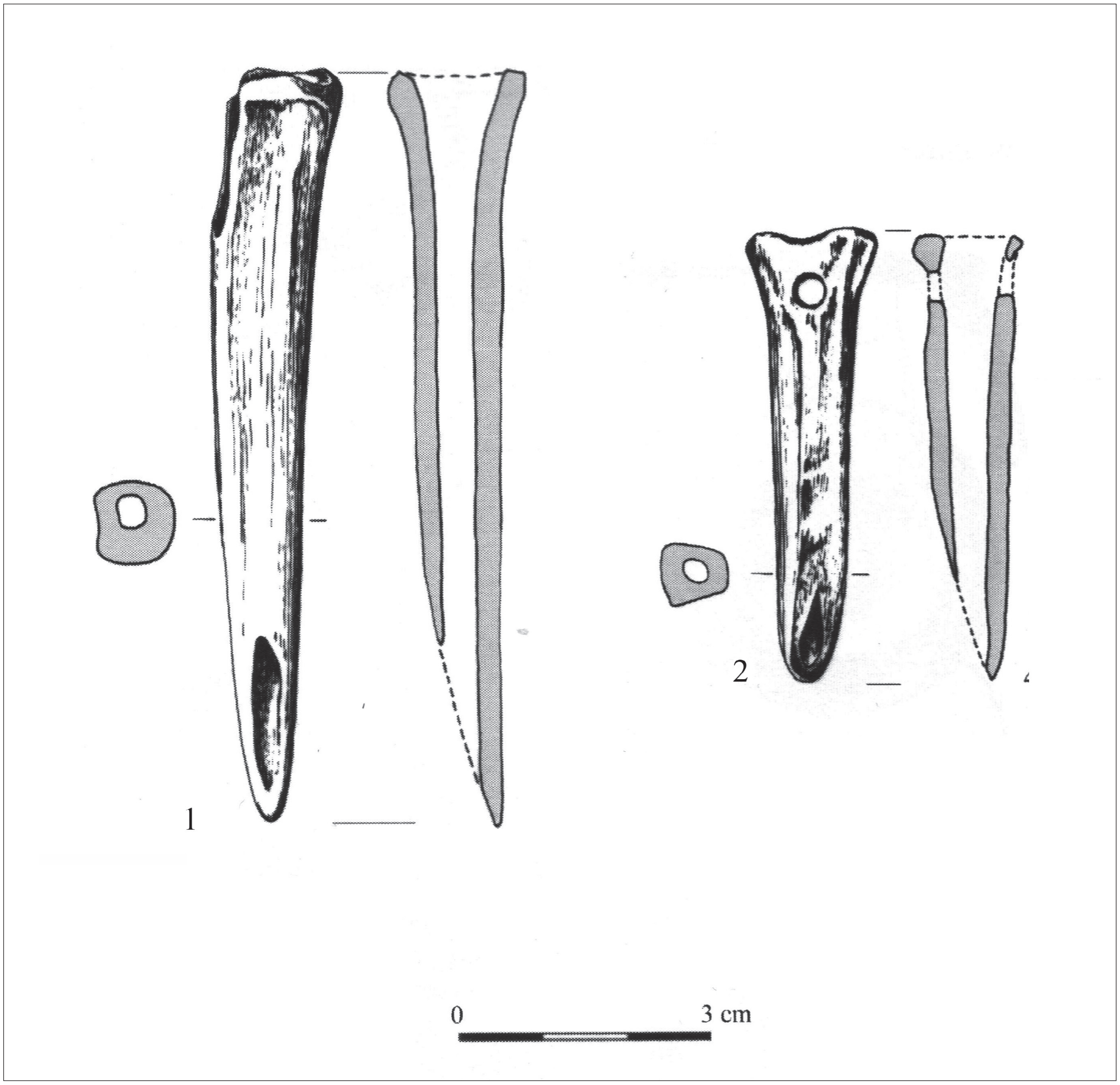

Figure 3.9. Bone or antler shafted weapon heads from the settlement in Lipianki (after Strobin 2015, fig. 31:2, 4).

Swords and Scabbards

This category of weapons is represented by a few finds (Fig. 3.10). As far as the artefacts from the beginning of the Early Roman Period related to the long existence of Oksywie Culture traditions are concerned, it is necessary to mention discoveries from Warszkowo, Sławno District. In Grave 2, apart from a bronze Almgren 12 type fibula which dated the assemblage to Phase B1,[97] there was a fragment of a sword hilt and forte, as well as two fragments of a sword scabbard of Type II according to Maria Danuta and Ryszard Wołągiewiczowie.[98] What is more, Grave 13 from this site yielded a single-edged sword of Type III, accompanied by a bronze fibula. The latter was similar to eye brooches and it dated the assemblage to the same phase. In addition, a glass bead was found in this grave.[99]

Among swords from the Early Roman Period, it is also necessary to mention a double-edged artefact (stray find), 75.5 cm in length, from Gronowo Górne

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[97] Grasselt 1998, 29–38.

[98] Wołągiewiczowie 1964, 102 pl. VIII:2; Wołągiewicz 1965, 182 pl. II; Eggers and Stary 2001, pl. 189:4. For discrepancies between published data concerning the swords from Warszkowo see Kontny 2008b, 181.

[99] Wołągiewiczowie 1964, 102; Wołągiewicz 1965, 183; Eggers and Stary 2001, 68 pl. 340:3–5.

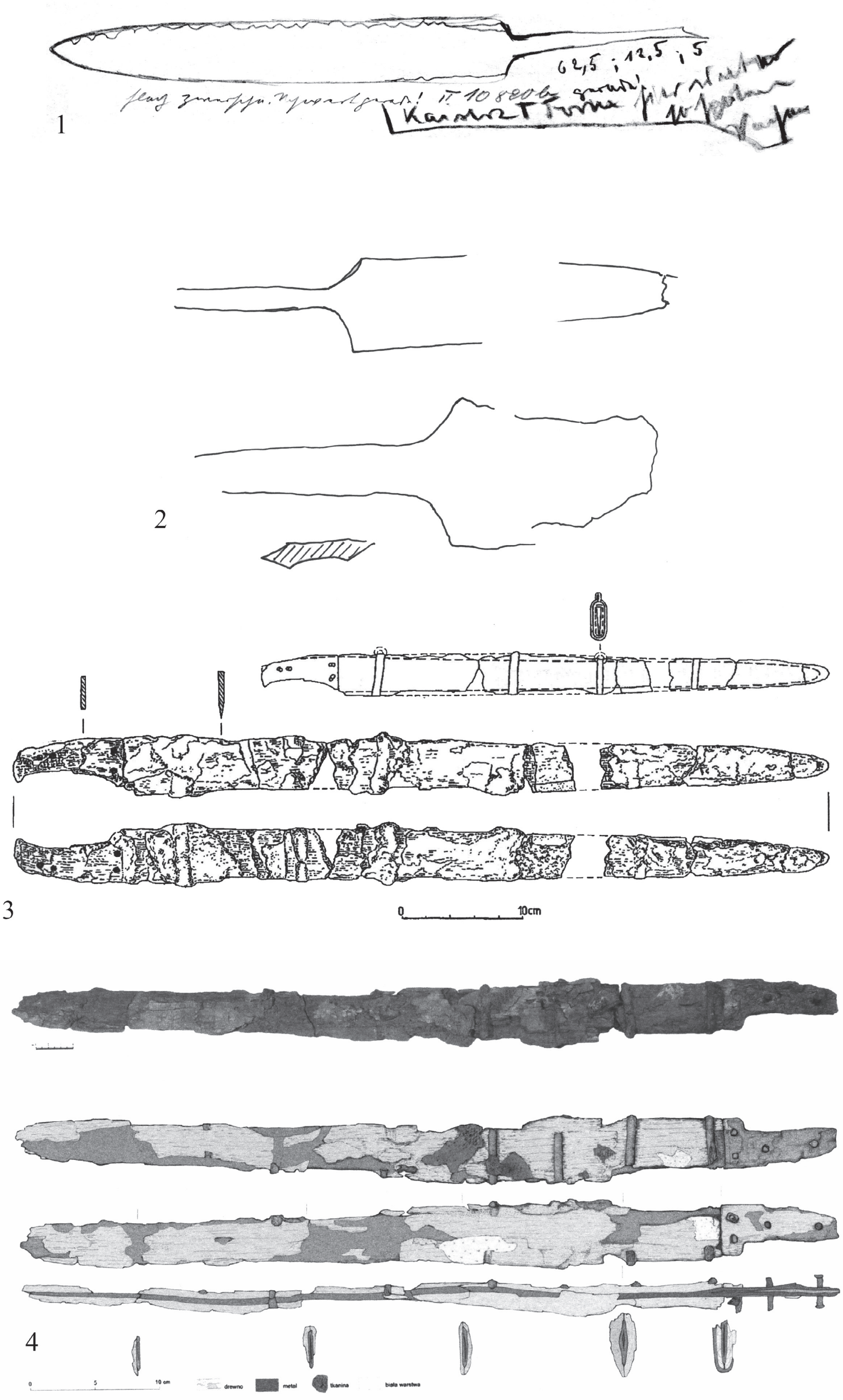
62,5 ; 12,5 ; 5
1
2
3
0
10cm
4
0
5
10 cm
drewno
metal
tkanina
biała warstwa

Figure 3.10. Swords from the territory of the Wielbark Culture. 1 — Piła, 2 — Gronowo Górne, 3 — Walkowice, inhumation grave, 4 — Opalenie, Grave 335 (1–2 after Jahn's heritage, 3 — after Gajda 2006, fig. 2.4 — after Adamska and Tuszyńska 2011, pl. II).

(former Grunau Höhe), Elbląg District. Its chronology, due to the sword's similarity to Type Biborski I/2,[100] was identified as Phase B1 (Fig. 3.10:2).[101] This short list of Wielbark Culture swords can be completed with yet another example, which is known from a sketch in Jahn's archive. It is a stray find discovered in a burial ground (?) in Piła, Piła District. It was a 62.5 cm long double-edged weapon. Its width was 5 cm, while the tang's length was 12.5 cm. One of the cutting edges was strongly corroded, as can be inferred from the sketch. What is more, the sword was straight (the note says: 'gerade!'), so it did not undergo ritual destruction (Fig. 3.10:1). It can be perhaps classified as Type Biborski III and dated to Phase B2.[102] Among the finds from Piła there may have been yet another short sword with the following dimensions: length 46.7 cm, width 5.2 cm, and tang's length 13.1 cm. However, nothing is said about its shape. Kaczanowski and Zaborowski stated that a sword fragment had been meant (?).[103] In fact, what Jahn wrote on the card was: '1 kurzes Schwert, 46,7 l.; 5,2 br Griff 13,1 l.'. Therefore, the sword was completely preserved. This data was repeated on another card concerning an ornamented axe from Piła. The sword came from the collection of a Piła building counsellor (German: *Baurath*) G. A. Crüger, the author of a work on antiquities from the Bygdoszcz Regency District. He is not very highly esteemed by historians of Greater Poland's archaeology due to his lack of criticism and his tendency to fantasize.[104] A description of the artefact together with its dimensions was published.[105] It is therefore only theoretically possible — due to the small size of the artefact — that this find was related to double-edged swords of Type Biborski II or III from the Early Roman Period.[106]

On account of the low sword finds number from the territory of the Wielbark Culture, the discovery of a 36 cm long double-edged sword in Złotów, Złotów District was considered significant. It was described by Andrzej Kokowski as 'the first sword from the territory of the Wielbark Culture' and it was classified by this researcher as Type Biborski II[107] from Phase B1 and the beginning of Subphase B2a.[108] This classification, however, was rejected due to dubious circumstances of discovery, and ornaments that were not found in other Roman Period finds. A major role, however, was played by metallurgical examinations, which demonstrated that the weapon was made from liquid metal, that is, in a technology that was not used in sword manufacture in this time.[109] The find was actually a nineteenth-century artilleryman's short sword;[110] this fact was eventually accepted by the author of the original publication.[111]

The territory of the Wielbark Culture yielded one more discovery: a hoard from Łubiana, Kościerzyna District, which contained (among other things) a fragment of a single-edged sword and a bronze fitting of a shoulder belt (*balteus*) that was used for suspension of the sword scabbard. Other finds included twenty-seven iron shafted weapon heads with fire patina, which are characteristic of the Przeworsk Culture, as well as bronze parts of shields (grip fragments and numerous edge fittings).[112] In spite of the territorial convergence, it is not possible to credibly relate this discovery to the Wielbark Culture. The artefacts in the hoard were robbed in the Early Migration Period by a craftsman-bronzeworker, perhaps from cemeteries in northern Greater Poland. The bronze raw material was supposedly hidden under useless iron that was deposited on the top. The plundered artefacts may come from the period of the necropolis use by the populations of both the Przeworsk and Wielbark Cultures. In the case of weaponry finds (perhaps with the exception of the *balteus* fitting and the shield fittings) its Przeworsk Culture provenance must be taken into account.[113]

This 'list of disappointments' can be completed with new discoveries. These are, however, fully-fledged. A find from Walkowice, Czarnków-Trzcianka District on the middle Noteć River must be mentioned here (Fig. 3.10:3). Furnishings of a locally discovered inhumation grave (it was prematurely classified as a boat burial) included, among other things, a single-edged sword. Its length was nearly 67 cm and its blade width was 4.2 cm. It remained in a scabbard made from ash-wood laths which were fastened together with four transverse clasps. Lockets were attached to two of these clasps. Rivets on the hilt were supposedly 'tightened' with a cord, and the scabbard's interior was lined with fabric.[114] As the lockets were fixed at different

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[100] Cf. Biborski 1978, 58–59.

[101] Kaczanowski and Zaborowski 1988, 224; Kontny 2008b, 181. This find is solely known from data in Martin Jahn's archive and it does not have many analogies (Variant Biborski I.2 was distinguished on the basis of only one sword).

[102] Kontny 2008b, 181 fig. 1:a; cf. Kaczanowski and Zaborowski 1988, 224–25.

[103] Kaczanowski and Zaborowski 1988, 225.

[104] Crüger 1872; on Crüger see Kostrzewski 1949, 56; Kaczmarek 1998, 327, 334, 338.

[105] 'Verzeichnis der Antiquitäten', 223.

[106] Biborski 1978, 62, 64–65, 69.

[107] Kokowski 1988.

[108] Biborski 1978, 64.

[109] Kontny 2008b, 181–82; cf. Makiewicz 1992, 112 n. 23.

[110] Identification by Dr habil. Marcin Biborski from the Institute of Archaeology, Jagiellonian University in Kraków.

[111] Kokowski 2006, 127–28.

[112] Mączyńska 2009a, 128–31 pls 55–56, 64–77.

[113] Mączyńska 2009a, 243–54.

[114] Gajda 2006, 231–33 fig. 2.

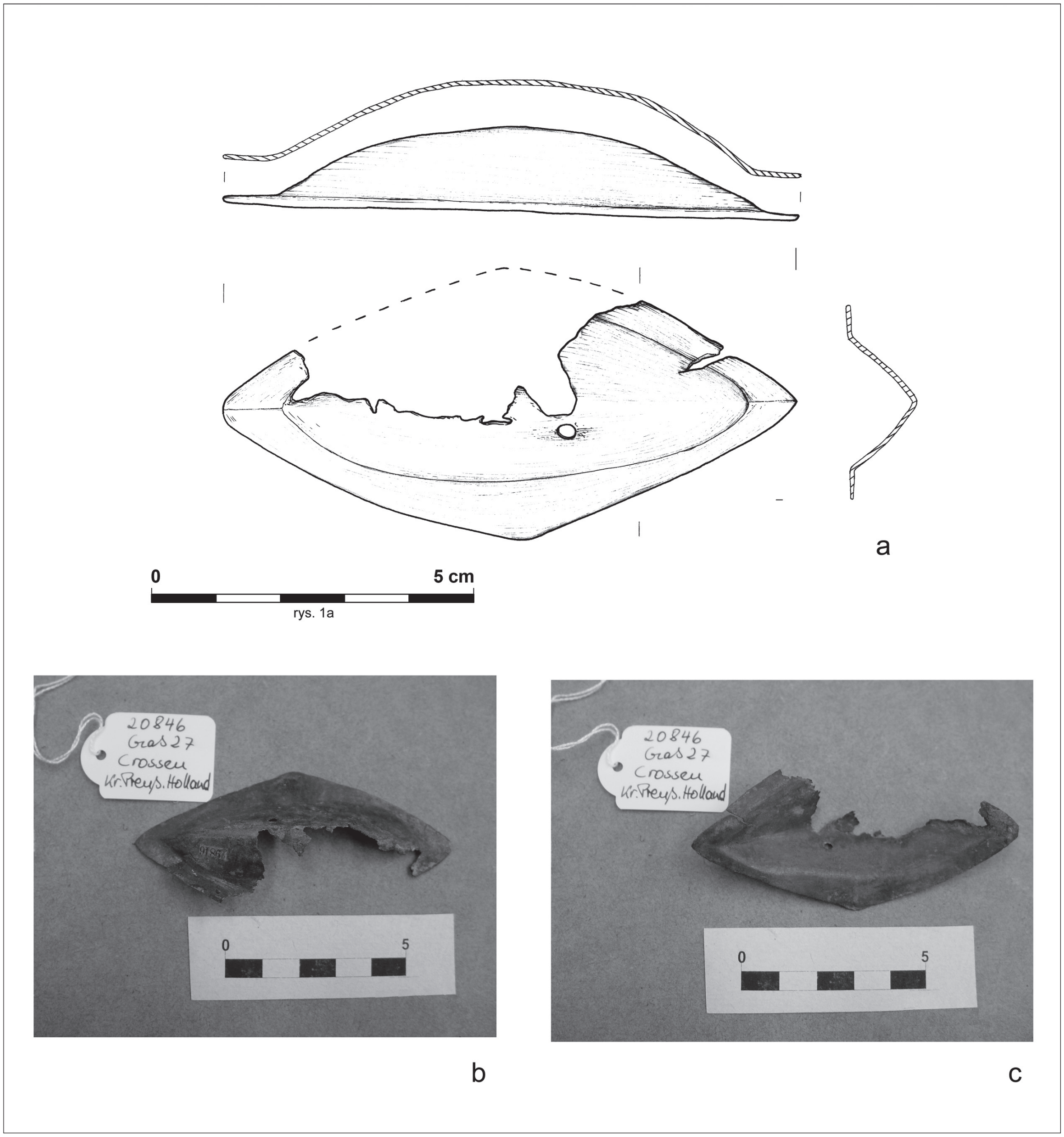

Figure 3.11. Boat-like sword pommel from Krosno, Grave 27 (after Kontny and Natuniewicz-Sekuła 2006, fig. 2:5).

heights on the side of the blade's back, the sword was suspended diagonally on the belt. Its horizontal position should rather be excluded, as it would greatly impede the warrior's movement. An assumption[115] that this sword has analogies in Scandinavian weapons, be it from the Later Pre-Roman Period or from the Early Roman Period, must be considered inaccurate. The discussed artefact should be classified as the 'Przeworsk Culture' Type Biborski B/1. The chronology of this type (Phases B1–B2a)[116] is in line with the chronology of other parts of the grave furnishings. The entire feature can be dated to Subphase B2a on the basis of a Type Almgren 75 fibula.[117]

Another recent discovery is a single-edged sword of Type Biborski B/1 from the inhumation Grave 335 in Opalenie, Tczew District (Fig. 3.10:4).[118] It was

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[115] Gajda 2006, 232.

[116] Biborski 1978, 121.

[117] Almgren 1897.

[118] Adamska and Tuszyńska 2011, 369, 372 pl. II.

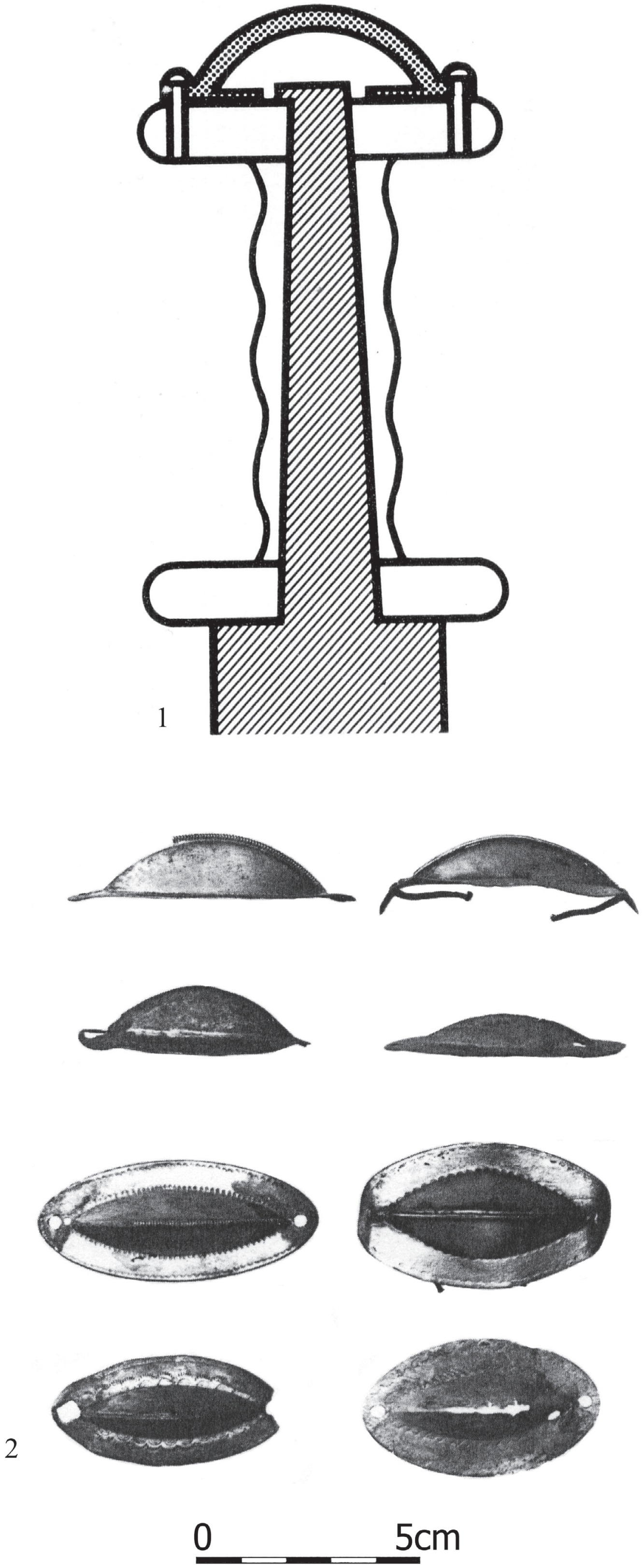

Figure 3.12. 1 — reconstruction of a hilt with a boat-like pommel, 2 — boat-like pommels from the bog site of Ejsbøl (1 — after Menghin 1983, fig. 28, 2 — after Ørsnes 1988, pls 94:1, 2, 4, 5, 7, 8, 10, 11).

first wrapped in cloth and then deposited next to the deceased's head. This sword also remained in a scabbard made from ash-wood laths that were fastened with band-like clasps. Regrettably, lockets did not survive and thus nothing can be said on how the weapon was worn. On the basis of fibulae of Type Almgren 67/68 the assemblage can be dated to the early part of Phase B1.

The next single-edged artefact comes from Białośliwie, Piła District (Fig. 2.3:6). It was discovered in the Noteć River as a stray find. It was once classified as a Migration Period scramaseax.[119] Although it has some features in common with early seaxes (e.g. the Nordic Type SAX3),[120] or western Langseaxes I and II,[121] there are some unique elements unknown in Merovingian Period artefacts. These are, for example, a tutulus-shaped knob at the end of the tang and a cross-guard made of an oval-shaped plate. The former trait is very typical of the Early Roman Period style, both in shield decorations (German: *Gegennieten*, Type Zieling A–B)[122] and double-edged sword hilt terminals, so-called ball-shaped knobs (German: *glockenförmige Knöpfe*). Such knobs were represented in Phase B1 but were used from the late first century BC until the second half of the third century, i.e. in Phases A3/B1–C2[123] and, in the case of shield grips, also in Subphase B2a.[124] Therefore, it can be assumed that it is a unique form from the Early Roman Period (Late Pre-Roman Period may be excluded due to the lack of the rivet holes in the grip). Its untypical traits (the use of the cross-guard and knob which is almost unknown in single-edged swords) might be explained by the ingenuity of a blacksmith and/or manufacture in a workshop run by a Wielbark Culture artisan, as in the Early Roman Period the region in question was settled by this cultural unit.[125] Therefore, it could be cautiously included in the short list of the Wielbark Culture weapons. Moreover, it was most probably found in a sacrificial context.

An overwhelming majority of the aforementioned swords that can be unquestionably related to the Wielbark Culture (Gronowo Górne, Warszkowo, Piła, Czarnków, and Opalenie) correspond to Przeworsk Culture patterns. All of these come from the Early Roman Period. This is not the case with a find from Grave 27 in Krosno (former Crossen), Pasłęk District (Fig. 3.11). Pre-World War II materials from this grave, which was in all probability a man's burial, included a bronze boat-like pommel of a double-edged sword. Its grip may have been hourglass-shaped, and it was dated to Phase C2. Such pommels are typical of Scandinavia and Finland (Fig. 3.12).[126] One is therefore dealing with a completely different direction of influences than in the case of Early Roman Period swords. The manufacture of such hilts on the southern coasts of the Baltic seems to be confirmed by a stray find of a bronze patrix for making boat-shaped pommels. This artefact was found in Lubieszewo, Gryfice District, and dates to the period when this area was settled by the Dębczyno Group population.[127]

The latest sword that is related to the territory of the Wielbark Culture is a long double-edged *spatha* of an Asian type from Juszkowo, Gdańsk District. It is dated to Phase D2, i.e. the period of the disappearance of this cultural unit. The sword was discovered together with, e.g. an amber sword bead in the inhumation grave of a man of about thirty in an abandoned Wielbark Culture settlement (Fig. 3.13). The nomadic nature of the burial is disproved by the lack of Mongoloid traits of the cranial skeleton, and the presence of a fibula, which does not occur in Hunnic graves. The presence of such a grave can be carefully explained by the return of a warrior to his homeland. While fighting in the south, this warrior may have assumed new burial rites which allowed for deposition of weapons into the grave. This, e.g. was the case with the Gepids.[128] A point, part of a perhaps similar sword was found during investigations in Hrebenne, Tomaszów Lubelski District,[129] and a cross-guard of another sword is known from a Przeworsk Culture settlement in Zamiechów, Jarosław District, Site 1.[130]

Two swords are known from the territory of the Masłomęcz Group (Fig. 2.1:A). These were hauled up from the Bug River near Gródek, Hrubieszów District, and from the Siniucha River near Czermno, Tomaszów Lubelski District.[131] The first one belongs

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[119] Petersen 1939, 73, 149–50 fig. 101; Makiewicz 1992, 113 fig. 5:5.

[120] Nørgård Jørgensen 1999, 53–57.

[121] Westphal 2002, fig. 5.

[122] See Zieling 1989, 276–77 pl. 36; Kontny 2019f, 209.

[123] Biborski and Ilkjær 2006, fig. 114; Miks 2007, 150 pl. E:2–3.

[124] Kontny 2019f, 209. The only single-edged artefact with a knob (in the shape of a ball situated on the collar) is known from Żelisławiec (former Sinzlow), Gryfino District (Jahn 1916, 136 fig. 160). It is dated to the Late Pre-Roman Period, but without any solid premises; equally well it may be an Early Roman Age specimen, and — taking into account that it is narrow — such chronology is even more probable.

[125] Ernst Petersen tends to reject its Roman Period origin as it lacks perpendicular rivets in the tang (Petersen 1939, 149–50) but the argument seems false as the main purpose of the knob was to keep the organic parts of the hilt together just as in the case of rivets, which, in the end, made the rivets unnecessary. On the other hand, Martin Jahn was not sure as to its chronology; there is a note in his files: 'Zeit?', and another: 'offenbar spät!' (Jahn's heritage).

[126] Kontny and Natuniewicz-Sekuła 2006, 311–17 fig. 2:5.

[127] Rau and others 2015, 193–94, 197 fig. 3.

[128] Kontny and Mączyńska 2015, 241–61.

[129] Niezabitowska-Wiśniewska 2009, 202 fig. 23:1.

[130] Půlpánová-Reszczyńska and others 2017, 122–24 figs 3.39:2, 3:40.

[131] Kokowski 2009, 200 fig. 12:e, f, h.

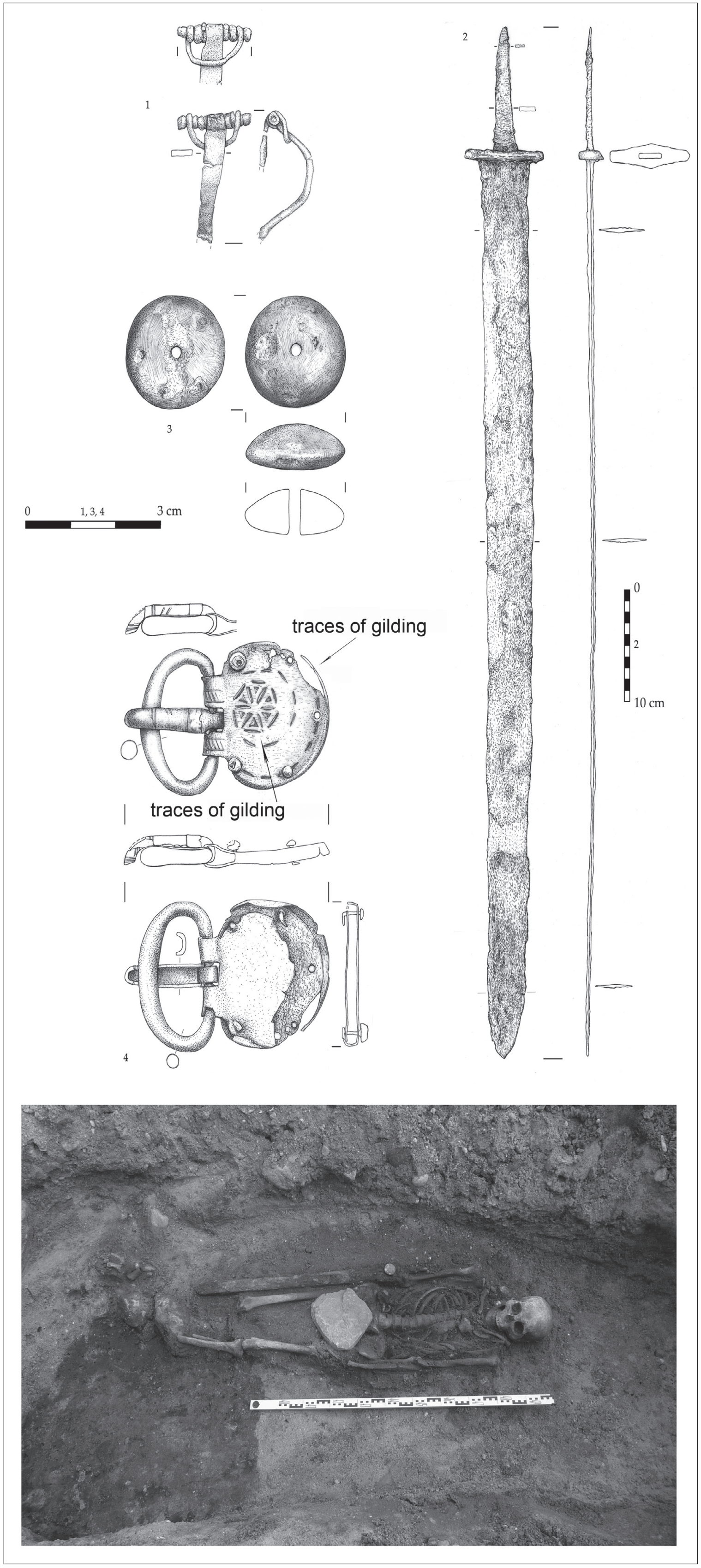

Figure 3.13. Early Migration Period grave from Juszkowo (after Kontny and Mączyńska 2015, figs 5, 6).

to Type Osterburken-Vrasselt, Variant 2 from Phase D (Fig. 3.14:8).[132] What survived of the sword from the Siniucha is a large part of the blade whose form is similar.[133] Its classification is not quite obvious, as the hilt is missing and it is thus impossible to estimate the weapon's proportion. Initially, the sword from Czermno was dated to the Early Migration Period but it occurred that a fragment of a possibly name-like inscription (perhaps somewhat related to the VLFBERHT group?) remained on its blade. Therefore, it might be an early medieval blade,[134] most probably of Type X or Xa after Ewart Oakeshott.[135] Yet another sword was found in the Bug River near Gródek (Fig. 3.14:9). It may belong to Type Vøien-Hedelisker, which is dated to the period between Phase C2 (mainly) and the beginning of Subphase D2.[136]

Furthermore, four sword scabbard slides dated to the Migration Period are known from Gródek (Fig. 3.14:1–4). Two of these[137] should be classified as Type Nydam-Porskjær, Group 2 after Andreas Rau (Fig. 3.14:1–2);[138] very similar artefacts, decorated with two silver rings of notched wires at the narrowing part, were discovered in an unidentified part of the Tuchola Forest (northern Poland), i.e. in the north-western borderland of the Wielbark Culture or slightly beyond it (Fig. 3.14:5).[139] The only difference between them and this type's classic version (Group 1) is the absence of a round and rectangular shield on the bow. Instead of such shields there is a pair of broad and rectangular combs or similar forms with concave and shorter sides. On the other hand, such forms are included in this type, as its distinguishing trait is the presence of two or three geometrically shaped plates (e.g. Taurapilis, Utena Region, Barrow 5 — Group 3).[140] Rau claims that their predominant dating is the Scandinavian Phase D1 (AD 410–460).[141] Such scabbard runners were found within the context of Group A graves with swords. According to Wilfried Menghin, this group can be dated to between the mid-fifth century and *c.* 480,[142] or — as proposed

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[132] Kokowski 2009, fig. 12:e; Biborski and Ilkjær 2006, 354 fig. 163:2.

[133] Kokowski 2009, fig. 12:f.

[134] Biborski and others 2006, 99–134; Kotowicz 2013, 57, with further literature.

[135] Oakeshott 1964.

[136] Biborski and Ilkjær 2006, 257, 259 table 39.

[137] Kokowski 2009, fig. 12:a, b. A third find (Fig. 3.14:4) can perhaps be added to this list (Kokowski 2009, fig. 12:d). It is, however, fragmentarily preserved and thus it is difficult to classify.

[138] Rau 2021, 327–29.

[139] Personal communication: Dawid Rembecki, MA — a PhD student from the University of Warsaw.

[140] Menghin 1983, 340; Miks 2007, 398 fig. 105.

[141] Rau 2021, 329.

[142] Menghin 1983, 58, 79 fig. 25; Miks 2007, 399.

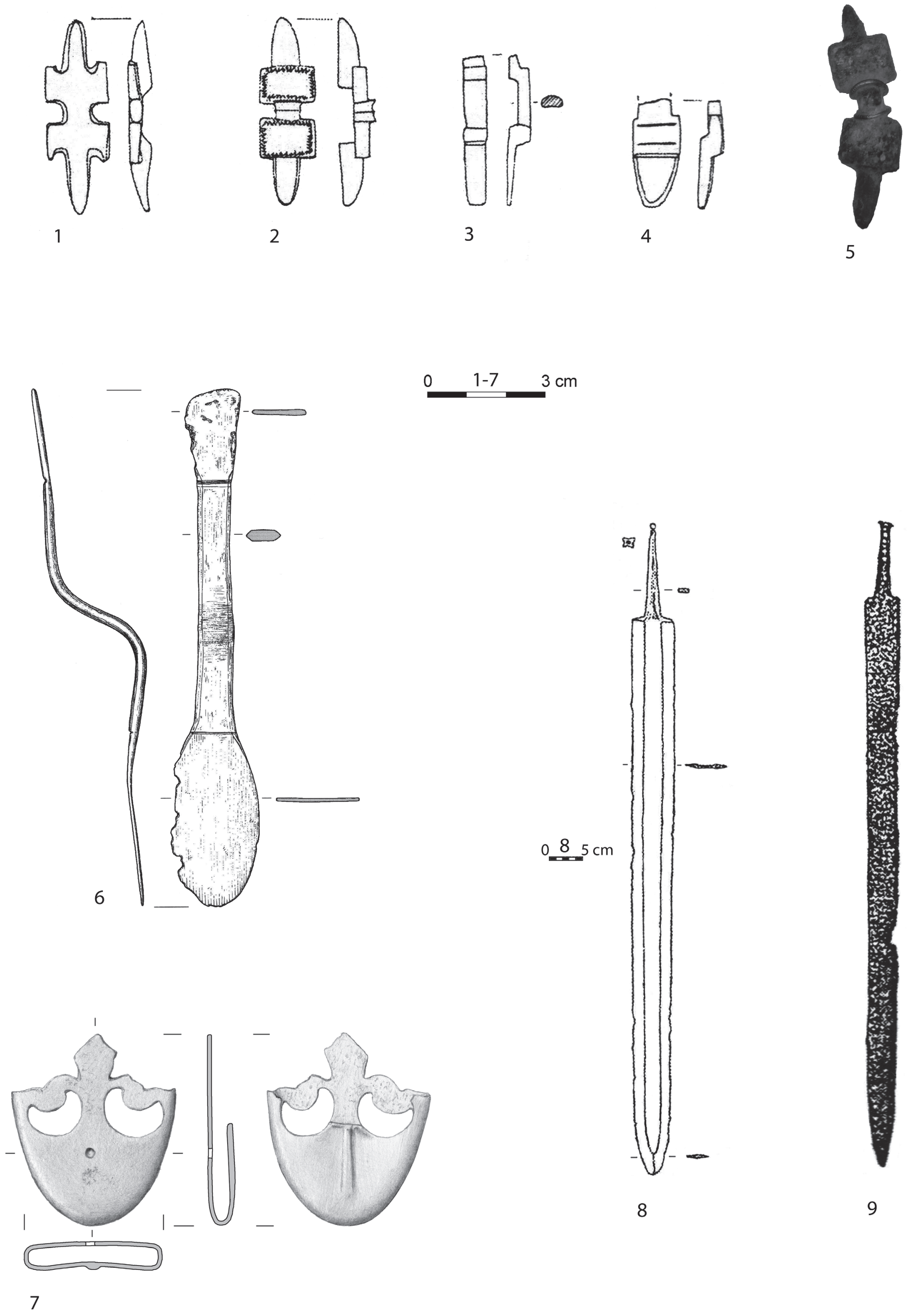

Figure 3.14. Scabbard elements and swords. 1–4 — scabbards slides from Gródek, 5 — scabbard slide from Tuchola, 6 — scabbard slide (?) from Orneta, 7 — chape from Silna, 8–9 — swords from the Bug River (1–4, 8–9 — after Kokowski 2009, fig. 12:a–e, h, 5 — courtesy Dawid Rembecki, published with permission, 6 — after Cieśliński 2010, pl. 21.A:5, 7 — after Kontny 2018b, fig. 3).

by Jan Bemmann on the basis of the analysis of the ornamentation stylistics — to *c.* 400–460.[143]

Until recently, such suspension elements were principally known from the Rhine region and northern Europe. Two exceptions were finds from Epöl, Komárom-Esztergom Country upon the middle Danube, and from Taurapilis in the territory of the East Lithuanian Barrow Culture.[144] The pair of scabbard slides from the latter site offers a very close analogy to the discussed finds, and they are dated to the end of Phase D or the turn of Phases D and E.[145] Therefore, a possible late chronology of the runners from Gródek should be taken into consideration. Recent discoveries also demonstrate the presence of slides of this kind in the post-Przeworsk Culture territories;[146] some may even come from the territory of Ukraine, although their discovery context is most frequently unclear.[147]

A different type is represented by yet another find (Fig. 3.14:3).[148] It is massive and narrow, and its bow part is pronounced in a knee-like manner. Similar examples are known from the Merovingian sphere, where they are referred to as sword scabbard suspension slide pendants with pointed terminals (German *Schwertriemendurchzüge mit Dornenden*). These were used in pairs, and they were symmetrically placed in the upper part of the scabbard. Such suspension loops were fastened by means of placing them between scabbard laths and leather thongs which were wrapped around the scabbard.[149] The fact that the slides were used in pairs can be explained by the considerable weight of the sword and the scabbard.[150] Also in this case their typological classification is quite problematic. Types that were isolated by Menghin were generally identified on the basis of ornamental differences, while the artefacts from Gródek are not ornamented. What is more, many scabbard slides with pointed terminals — as admitted by Menghin himself — do not fit within his typology. However, Rau has recently separated Type Gródek-Bad Segeberg in order to include the aforementioned forms.[151] Scabbard runners described by Menghin accompanied the *Goldgriffspatha* type swords and they can be found in south-western Germany up to the middle Rhine region. Such artefacts can be dated to Phase A and possibly Phase B according to Menghin,[152] which is roughly between the mid-fifth century and about 520.

This image was generally not altered by the work of Christian Miks who dated such artefacts to the period between the second half of the fifth century and about 530.[153] However, Rau suggests that the Gródek-Segeberg type finds should be placed in continental Phases D1 and especially D2. He also explains them as a result of the continuous development of Roman armament elements of the Middle Imperial Period.[154] This chronology should be assumed in the case of the discussed artefact.

This is not the only find of this kind from the territory of Poland. A similar artefact (a bit more slender, not ornamented with faceting, with straight terminals) was discovered as a stray find in Gąski-Wierzbiczany in Cuiavia.[155] Yet another (also a stray find) is known from Gajew, Kutno District, in central Poland.[156] The first one is not ornamented, while the other is decorated with transverse grooves (perhaps originally inlaid) in the points of contact of the bow and the arms. Because of this, the artefact was classified as Type Hemmingen-Pleidesheim. Furthermore, two stray finds of stocky and ornamented artefacts are known from Spiczyn, Łęczna District,[157] another from Łęki Wielkie, Grodzisk Wielkopolski District,[158] and many more come from Ukraine, though unfortunately from uncertain contexts.[159]

The aforementioned runners from Gródek are to be related to the so-called post-Masłomęcz horizon, as they are dated to the period after the disappearance of the local Masłomęcz cultural group, being part of the Goths' cultural circle. It is not clear whether these artefacts can be related to the Gothic sphere at all, but bearing in mind the items' territorial distribution, specifically the Ukrainian, i.e. very late or post-Černâhov Culture specimens, it seems likely that they are of Gothic origin; see also the distribution of Type Nydam-Porskjær finds.

Theoretically, one may also consider a possible scabbard slide from Orneta, Lidzbark Warmiński

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[143] Bemmann 2006, 220–21.

[144] Menghin 1983, 340 map 13; Miks 2007, 399–400.

[145] Werner 1977, 87–92.

[146] Spiczyn, Łęczna District, stray find, Group 1 — Łuczkiewicz 2009, 172 fig. 3:1–2; Gąski-Wierzbiczany, Inowrocław District, Group 1 — Kontny and Rudnicki 2020, 505–06 fig. 14.1:3; cf. Bemmann 2006, fig. 5 list 1. See also Rau 2021, fig. 5.

[147] Rau 2021, 341, figs 2, 5.

[148] Kokowski 2009, fig. 12:c.

[149] Menghin 1983, 102 fig. 62.

[150] Miks 2007, 404.

[151] Rau 2021, 332–36.

[152] Menghin 1983, 104, 106, 108, 139 fig. 79.

[153] Miks 2007, 400–04.

[154] Rau 2021, 336.

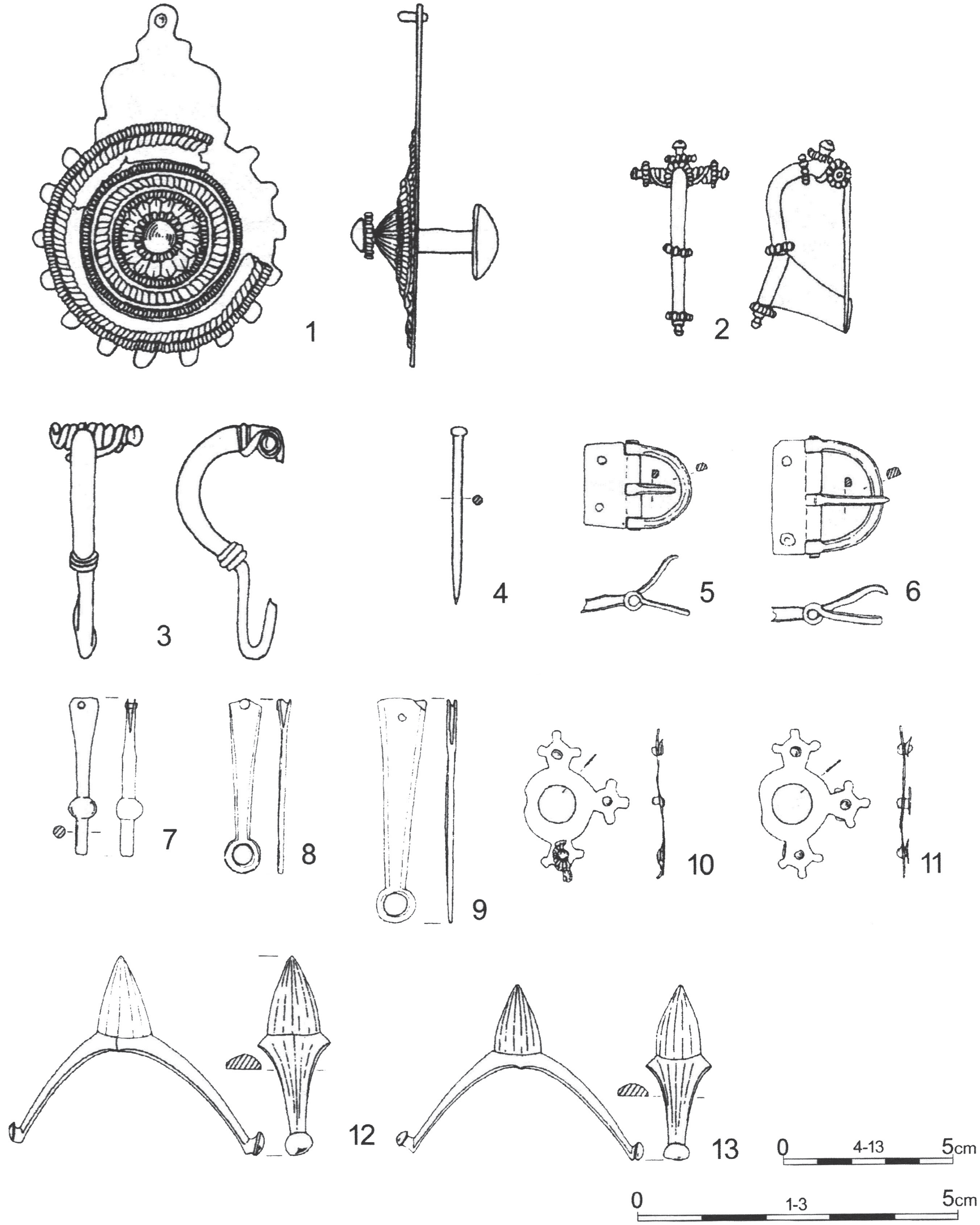
[155] Kontny and Rudnicki 2020, 503, 505 fig. 14.1:2.

[156] Kowalska 2014, 229–30 fig. 4:31.

[157] Łuczkiewicz 2009, 174 fig. 2:9–10.

[158] Rau 2021, 341 fig. 8:4. The author also attributes to these forms the finds from the Przeworsk Culture cremation layer necropolis at Olsztyn, Częstochowa District (Szydłowski 1974, pls 164: k–l; Rau 2021, 341) but they are not as thick as the rest. Thus, they should be rather classified as thin scabbard slides which were used individually. Such finds were discussed by Kaczanowski (1992, 39–42) who also assigned the finds from Olsztyn to the abovementioned group, namely Type I (Kaczanowski 1992, 39).

[159] Rau 2021, 336, 341–42 fig. 9.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5cm

Figure 3.15. Kamienica Szlachecka, Grave 5, with shoulder belt fittings for suspending the sword scabbard (after Tuszyńska 1998, fig. 1).

District, Grave 1/1933 (Fig. 3.14:6). It is made of copper alloy and it has trapezoid and oval terminals. It may thus resemble the rare Type II after Kaczanowski, dated to Subphase C1a[160] although its chronology was established on the basis of scarce data. Therefore, it may be much wider, embracing the whole Phase C and maybe even the Early Migration Period as in the case of further types of that group[161] (the specimen in question is dated to the Younger Roman Period).[162] Its central part is distorted so one cannot be utterly sure as to its purpose, but it still seems to suggest a central European origin for the artefact. What is more, the material that was used stands in accordance with the Wielbark Culture burial rite.

A supposition that in the Younger Roman Period northern territories began to grow in significance with regard to cold steel also receives support from the find in Grave 5, Kamienica Szlachecka, Kartuzy District (Fig. 3.15). This is an ornamented *balteus* fitting (German *Balteusschließe*)[163] made in a Barbarian fashion from an embossed gilded silver sheet. There are analogies to this artefact in the north European *Barbaricum* and in the Elbeland zone (Fig. 3.15:1).[164] This find is dated to Subphase C1b.[165] Another identically dated artefact was discovered in an inhumation grave (Feature 114) in the necropolis in Linowo, Grudziądz District.[166] It is also stylistically related to northern European finds. It was made of copper alloy and is composed of three circular sheets with cusps on their circumferences. The ornament is formed by an embossed silver sheet with a motif of concentric circular pseudo-pearl patterns. The circular cusps are decorated in a similar manner. However, the aforementioned *balteus* fitting from the hoard in Łubiana is of Roman provenance. It was classified as Group I, Variant 1.[167] In the Przeworsk Culture, fittings of this kind occur extremely sporadically, and known finds were made of iron. On the other hand, bronze *Balteusschließen* of Roman provenance are well documented in Scandinavia and Elbeland.[168]

What can be concluded is that the fitting from Łubiana was not necessarily plundered from a Przeworsk Culture burial ground. It is more probable that it was obtained in the course of grave opening at a Wielbark Culture necropolis, where it was deposited into the grave with no weapon, but with a sword scabbard suspension belt, as in the case of artefacts from Kamienica Szlachecka and Linowo. This implies northern or possibly western influences in the military sphere, the more so that the earliest fittings of this kind appeared in the *Barbaricum* in Subphase C1a.[169] The same direction is suggested by a recent find of a Roman sword scabbard chape in Silna, Międzyrzecz District (Fig. 3.14:7). It was made of copper alloy and belongs to Type Novaesium (a variant without extensions over openwork decorations on the sides). It is a stray find, but there is no doubt that it is related to the Wielbark Culture. In the period to which this artefact is dated there were Wielbark Culture sites in the direct vicinity (Brójce, Międzyrzecz District and Jordanowo, Świebodzin District).[170] Chapes of this kind are dated to Phase C1 and they were quite rare in *Barbaricum*, especially in the territory of today's Poland. They are chiefly known from Elbe Germanic areas and southern Scandinavia. Therefore, the artefact from Silna may be of Scandinavian origin.[171]

Shields

The most numerous group of shield parts that are known from the territory of the Wielbark Culture are shield bosses. Apart from the aforementioned Jahn 6 type artefact from Prusinowo, it is also possible to mention finds of the same type from Piła (Fig. 3.16:3),[172] and from Gronowo Górne, Elbląg District (Fig. 3.16:4).[173] All of these should be dated to the late part of Phase B1 (in Scandinavia they still occur in Phase B2, while in the West Balt zone they were in use as late as the beginning of the Younger Roman Period).[174] A conical shield boss of Type Jahn 5 from Bydgoszcz (Fig. 3.16:2) must also be added to this assemblage, on the basis of a schematic drawing in Jahn's files. In the Przeworsk Culture, such forms are typical of Phase B1, excluding its last part.[175] The drawing shows a vertical seam on the cone. In all probability, it refers to a peculiar technology of manufacture from an iron sheet. The boss was profiled in a conical manner and its edges were lap-welded. This technology was not used very often and it can be chiefly found in Jahn 5 shield bosses.[176] The list of Wielbark Culture shield fittings also includes

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[160] Kaczanowski 1992, 39 fig. 9:2.
[161] See Kaczanowski 1992, 39–42.
[162] Cieśliński 2010, 258 pl. 21.A:5.
[163] Tuszyńska 1998, 114–15 figs 1–2; Przybyła 2010, fig. 10; Tuszyńska 2020, 16, pl. V:4.
[164] Cf. Przybyła 2010, 102–25.
[165] Przybyła 2010, 117.
[166] Kurzyńska 2015, 39–40, 72–73 pls XXX:2–4, XC:2.
[167] Biborski 1997, 244 fig. 2:a.
[168] Przybyła 2010, fig. 2.
[169] Biborski 1997, 249.
[170] See Gałęzowska 2007, 188, 192 table 1, with further reading.
[171] Kontny 2018b, with further reading.
[172] Jahn's heritage; Kontny 2008b, 184 fig. 2:a.
[173] Jahn's heritage; Kaczanowski and Zaborowski 1988, 224 fig. 2; Kontny 2008b, 184 fig. 2:b.
[174] Godłowski 1992, 72; Ilkjær 1990, fig. 199; Kontny 2015a, 308–10.
[175] Godłowski 1992, 72; Ilkjær 1990, fig. 199.
[176] Jahn 1916, 170–71; Kontny 2007a, 95–96.

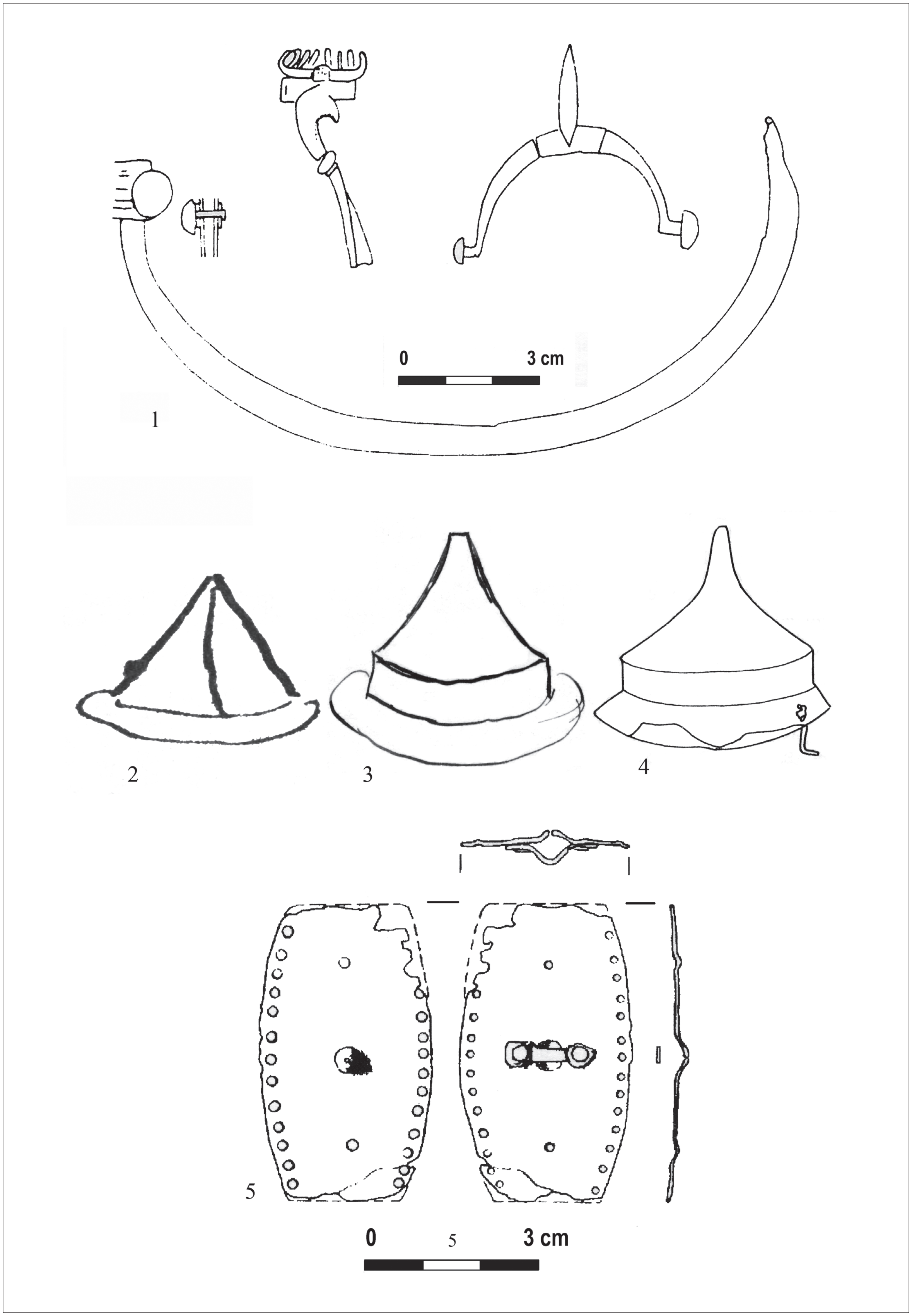

Figure 3.16. Shield fittings and a shield image from the territory of the Wielbark Culture. 1 — Nowe Dobra, Grave VIII/1904, 2 — Bydgoszcz, 3 — Piła, 4 — Gronowo Górne (after Jahn's heritage), 5 — Nowy Targ, Grave 69 (1–4 — after Jahn's heritage, 5 — after Kaczanowski and Zaborowski 1988, fig. 4).

a find from Grave VIII/1904 in Nowe Dobra (former Neuguth), Chełmno District. The assemblage (Fig. 3.16:1) is dated to the beginning of Phase B1 on the basis of a Type Almgren 67 fibula. It included a Ginalski C1 type spur, which confirms its chronology,[177] and a fitting of a shield boss edge.[178] The latter was used as part of the shield's ornamentation. Similar fittings from copper alloy, whose colour contrasted with the iron of the shield boss, were testified to as early as the end of the Late Pre-Roman Period in the Przeworsk Culture and in the Elbeland zone.[179] However, they are also known from the Roman Period, e.g. from shield bosses discovered at Scandinavian bog sites,[180] and also (sporadically) from the Przeworsk Culture finds.[181] Apart from decoration value, such fittings could also protect the shield surface against damage inflicted by the relatively sharp edges of the shield boss.[182] They might have been frequently used in the Wielbark Culture — its influence can, perhaps, explain the presence of bronze decorations of shield edges and rivets in the eastern zone of the Przeworsk Culture.[183]

Jahn also mentions a shield boss rivet from Zelgniewo (former Selgenau), Piła District, which is characteristic of the Early Roman Period.[184] In Barrow I dated to Phase B2 (equipped, i.e. with the fibula of Type Almgren 110) that was discovered at this site there was an iron band with remains of timber and a rivet with a bronze head. These remains were interpreted as a shield. However, due to the absence of other shield fittings it seems justified to accept the assumption of Andrzej Kokowski,[185] who believed that these were the remains of a casket. In the case of such artefacts, the applied rivets or nails strongly resembled those used in shields.[186]

It is necessary to mention discoveries from Drozdowo, Łomża District: the shield boss with a short massive spike from Grave 37 as well as the boss with a very small apex accompanied by the shield grip with indistinct rivet plates from Grave 76. These assemblages are dated to the beginning of the Younger Roman Period. The first may imply a long period of Jahn 6 type shield bosses use, which was also the case in the West Balt zone.[187] One should mention the aforestated Jahn 7a type shield boss from Wyszomierz Wielki, Zambrów District as well.[188]

The following shield bosses from the Younger Roman Period and the Late Roman Period were also believed to be related to the Wielbark Culture: a Type Zieling K1 artefact with a broad flange from Węgra, Przasnysz District,[189] and a find from Kołoząb, Płońsk District.[190] It was assumed that such artefacts were testimonies to the long existence of Przeworsk Culture traditions (graves with weaponry) in territories that had already been settled by the Wielbark Culture. These traditions resulted from the conservatism of some post-Przeworsk Culture groups that became part of the new community. Regrettably, such fittings are to be removed from the list of Wielbark Culture weaponry. The artefact from Kołoząb was published incorrectly, and is in fact related to the Przeworsk Culture's use of the necropolis.[191] Moreover, the find from Węgra is a part of Podczaszyński's collection and there is no evidence at all that it is related to the necropolis in Węgra.[192]

As was mentioned earlier in the text, examples for the custom of furnishing graves with weapons in the Wielbark Culture in the territories that were previously occupied by the Przeworsk Culture's eastern zone were recorded in the necropolis in Drozdowo. These were the shield boss with the short massive spike and the Jahn 9 type shield grip with fan-shaped, gently pronounced rivet plates, dated to the late part of Subphase C1a, found in Grave 37. Other examples are a very late case of a Jahn 6 shield boss, comparable with the latest finds from the West Balt Circle, and a Jahn 9 shield grip with trapezoid indistinct rivet plates from Phase B2/C1.[193] Such a late instance of a shield boss with a very small spike seems to imply some connections with West Balt territories. These connections, however, are difficult to assess.

The bronze artefacts from Łubiana should also perhaps be classified as Wielbark Culture shield grips and shield edge fittings.[194] This is due to the fact that the robbery the fruit of which is the hoard discovered in this locality encompassed both Wielbark and Przeworsk Culture necropoleis; copper-alloy shield grips are almost unknown in the latter. It is, therefore, necessary to point out Early Roman Period[195] forms of Types Jahn 7 (a fragment of a rivet plate no. W2, fragments of a grip no. W4), and Jahn 8 (fragment of a rivet head no. W3). A fragment of plate no. W11 was in fact a part of the ferrule of some reins, not part of a shield grip. It must be classified as Type Rh1 according to Susanne Wilbers-Rost. This type is dated to the Early Roman Period and known both from the Przeworsk Culture, Scandinavia, central Germany, and Balt territories.[196] In this case, the raw material cannot be an indicator of cultural relationships, as Przeworsk Culture artefacts of this kind were also sometimes manufactured of copper alloy.

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[177] Ginalski 1991, 57–58.
[178] Jahn's heritage; Kaczanowski and Zaborowski 1988, 223 fig. 1; Kontny 2008b, 184 fig. 2:c — with, among other things, a discussion concerning the function of the artefact.
[179] Kaczanowski and Zaborowski 1988, 223, with further reading.
[180] Illerup — Ilkjær 2001, 18 figs 4, 5; Ejsbøl — Ørsnes 1988, 88 pl. 145:7–15; Thorsberg — Matešić 2015, 160–61 pls 57: M405, 64: M430, 67:436, M439, 70: M446, 71: M447, table 4; von Carnap-Bornheim 2014, 160; Vimose — Pauli Jensen 2008, 213.
[181] Jaksonów, Wrocław District — Pescheck 1939, fig. 68; Kamieńczyk, Wyszków District, Grave 170 — Dąbrowska 1997, 42 pl. XC:8; Czersk, Piaseczno District, Grave 93 — Czarnecka 2014, 107 fig. 4:1.
[182] Matešić 2015, 160.
[183] Andrzejowski 2019.
[184] Jahn 1916, 254–55; Götze 1904, 3–5 fig. 3; Kaczanowski and Zaborowski 1988, 224.
[185] Kaczanowski and Zaborowski 1988, 131.
[186] e.g. Opatów, Kłobuck District, Grave 1129 — Zagórska-Telega 2000, 314 fig. 5:9.
[187] Kontny 2015a, 308–10.
[188] Rakowski 2020, 322 fig. 5:2.
[189] Kaczanowski and Zaborowski 1988, 229 fig. 6.
[190] Tomaszewska 1988, fig. 1:1.
[191] Kontny 2008b, n. 2.
[192] Andrzejowski 2016, 19–20, 27 fig. 8:a, 9.
[193] Concerning the chronology, cf. Kontny 2015, 308–10; Godłowski 1994a, fig. 1.
[194] Mączyńska 2009, 130–31 pls 55–56, 74–77.

However, the remaining fragments that were believed to be pieces of shield grips cast serious doubts upon such an interpretation (W7–10, 13). This is due to the absence of exact analogies among shield fittings.[197] The presence of bronze shield grips belonging to the aforementioned types implies Scandinavian connections, where such artefacts are quite widespread. Another option is the Elbe Germanic area.[198] Are we, therefore, dealing with exceptional parts of weapons that were originally deposited in Wielbark Culture burial grounds? As non-ferrous artefacts they did not break the rules of funeral rites and, in theory, they may have been deposited into graves. On the other hand, so far there have been no analogies from the sepulchral context in the sphere of Gothic cultures. The uniqueness of such solutions in the Przeworsk Culture allows for very careful identification of such shield grips as Wielbark Culture artefacts. Additionally, once again one has to recall the Zieling V2 type shield grip from Wyszomierz Wielki.[199]

The only find which allows for a trustworthy reconstruction of shield forms from the territory of the Wielbark Culture is a bronze miniature from Grave 69 in the cemetery at Nowy Targ, Malbork District (Fig. 3.16:5). On the basis of the raw material of this artefact it can be excluded that it is an import from the territory of the Przeworsk Culture; only iron artefacts of this kind are known there. What is more, the discussed find is more schematic than miniatures known from the Przeworsk Culture. The assemblage from Grave 69 can be dated to Phase B1 and the earlier part of Phase B2.[200] The shield model is oblong and oval-rectangular (dimensions: 53 × 19–29 mm). Its grip is situated horizontally, and there are rows of points along the shield edges. These were perhaps to imitate nails or pegs which fastened leather or another organic reinforcement of the shield plate. Individual points above and below the bulge of the shield boss seem to stand for ornamental knobs. Such miniatures were used as amulets, but their shapes corresponded to the actual shapes of battle shields.[201] They are generally unknown beyond the Przeworsk Culture in the Early Roman Period. Therefore, it seems clear that such an artefact occurred in a Wielbark Culture assemblage as the result of Przeworsk Culture influence. This, however, does not mean that Wielbark Culture shields were exactly of the same shape and construction. One might summon to mind the narrative of Tacitus, which is the only one that contains a description of the weaponry of the Rugii, the Lemovii, and the Gotones: 'omniumque harum gentium insigne rotunda scuta, breves gladii et erga reges obsequium' (the badge of all these tribes being the round shield, the short sword, and servile submission to their kings).[202] I offered an attempt at verification of this narrative in a separate publication.[203] The result, however, is not impressive: it proved impossible to verify the first part of Tacitus's report on the basis of finds from the Wielbark Culture territory. Only a miniature shield from Nowy Targ could be used as a point of reference (a negative one!), but this is a too feeble basis to draw any significant conclusions.

An inversion of this narrative, that is, a verification if other kinds of shields (not round) were used in neighbouring cultures, brings no satisfactory results either. Regarding the piece of information on short swords, it is impossible to demonstrate any differences between the Wielbark Culture and the adjacent cultures (obviously, it must be remembered that the assemblage is not very impressive). On the other hand, Tacitus's narrative becomes more credible if one assumes that this author might have used anachronistic data. It is enough to shift it back to about one hundred years before *Germania*, i.e. to the end of the Pre-Roman Period; thanks to that the image becomes clear, at least with regard to swords. In the Oksywie Culture (a predecessor of the Wielbark Culture) there was a strong preponderance of single-edged swords in the Late Pre-Roman Period. Such weapons were clearly shorter than La Tène style double-edged ones that were broadly used in the Przeworsk Culture or in the southern and western parts of present-day Denmark.

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[195] Godłowski 1992, 72.

[196] Wilbers-Rost 1994, 59 map 7.

[197] Cf. Jahn 1916, 185–91 figs 204–18.

[198] Czarnecka 2014, 106, 108.

[199] Rakowski 2020, 322 fig. 5:1.

[200] Kaczanowski and Zaborowski 1988, 225–26 fig. 4; Andrzejowski 2000, 26–27 fig. 2:5; Fudzińska and Fudziński 2013, 28 pl. VIII:1.

[201] Cf. Chapter 5.

[202] Tacitus, *Germania*, XLIV.

[203] For further reading see Kontny 2008b, 180–95.

Examples of such outdated pieces of information occur frequently in *Germania*. Does this mean that one should expect round shields in the Oksywie Culture? Sources are not too numerous, but those which survived do not confirm such an assumption. One of the Phase A3 graves in the necropolis in Pruszcz Gdański, Gdańsk District, Site 13, yielded a complete set of shield edge fittings. On this basis it was possible to reconstruct the shield's shape, and it resembles that of the miniature from Nowy Targ.[204] What is more, Grave 48 from Skowarcz, Gdańsk District, contained a fragment of an edge fitting that was formed at a right angle.[205] This confirms that at least some shields that were used in this period were rectangular (or possibly hexagonal and strongly elongated). Regarding other fragmentarily preserved arcuate shield edge fittings from this period, it is supposed that the plates of such shields were round or oval.[206]

Axes

Kaczanowski and Zaborowski paid attention to the considerable significance of axes in the Wielbark Culture. The very custom of providing the dead with this type of weapon dates back to the Oksywie Culture.[207] However, a list of finds that are mentioned in the work of these scholars requires verification. The axe from the inhumation Grave II in Drawsko Pomorskie, Drawsko Pomorskie District,[208] was classified as the western series of Group 5 according to Grzegorz Kieferling.[209] However, this assemblage encompasses artefacts varied in their morphology and chronology. It includes finds related to the Late Pre-Roman Period (Oksywie Culture), and the Roman Period (among others, Elbeland zone, Przeworsk Culture, and Černâhov Culture). Therefore, the axe shape alone cannot be used as a chronological marker. What is more, the remaining furnishings — scissors and a knife — do not help in dating the find either. Thus, one can wonder if the axe from Drawsko can in fact be related to the Wielbark Culture phase of the necropolis use. Similar axes with symmetrical blades which are slightly widened in an arcuate manner and have rounded butts are known from the Oksywie Culture.[210] Furthermore, inhumation graves also occur in this culture, thus outpacing a breakthrough in this sphere of burial rites that took place with the advent of the Wielbark Culture.[211] Therefore, it seems more probable that it is, in fact, an Oksywie Culture artefact.[212]

Two axes are known from Skowarcz (former Schönwarling), Gdańsk District. One of these was 18.5 cm long and its butt was 4 cm wide and not very high. The blade was broad and its asymmetry was perhaps only partially due to corrosion (Fig. 3.17:2). Before World War II finds from Skowarcz were stored in the museum in Danzig (today: Gdańsk). Today, they are believed to have been lost (the axe's inv. no. was 12520). A sketch in Jahn's archive is careless and its published version (in fact, a redrawing) is incomplete (the lengthwise cross-section was omitted) and amended.[213] The lack of data on the context of discovery hinders establishing the artefact's chronology. In theory, it most resembles some finds classified as the western series of Group Kieferling 5; however, the borders of this series were not marked precisely. As there is hardly any similarity to Oksywie Culture forms in this case and it is possible to point out many analogies in the Černâhov Culture and the Sântana de Mureş Culture,[214] I would rather relate the discussed artefact to the (Younger?) Roman Period and thus classify it as a Wielbark Culture find.

The case of the other axe from Skowarcz (also a stray find; Fig. 3.17:1) is completely different. It belongs to the range of forms typical of the Oksywie Culture, also because of its size.[215] The sole detail that is different is a 4 cm long vertical tang which is attached by corrosion to the internal side of the axe's eye. This tang may have

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[204] Information from Mirosław Pietrzak, MA from the Archaeological Museum in Gdańsk, to whom I am indebted for an opportunity to personally examine the shield parts. I also owe thanks to Małgorzata Tuszyńska, MA, Head of the Department of the Roman Period, where finds from Pruszcz Gdański are stored.

[205] Jahn 1916, 164 fig. 194.

[206] Jahn 1916, 163–64.

[207] Kaczanowski and Zaborowski 1988, 232 fig. 8.

[208] Wołągiewicz 1969, 10–11; Chrupek 2019, 126–27.

[209] Kieferling 1994, 343 fig. 7:3.

[210] Podwiesk, Chełmno District, Site 2, Grave 341 — Bokiniec 2005, 66 pl. CXVI:341.6; Nowe Dobra, Chełmno District, Grave 11 — Kostrzewski 1919, 172 fig. 187; Kaczanowski and Zaborowski 1988, fig. 8:A; Parsęcko (former Persanzig), Szczecinek District — Eggers and Stary 2001, 67 pl. 188:1; Grudziądz-Rządz (former Rondsen), Grudziądz District, Grave 92 (Pit Grave 8 from 10 October 1887) — Anger 1890, 16–17 pl. 14:17; Kurzyńska 2020, 80 pls 121:8, 194:8.

[211] Margos 2000, 257, 260–63. The author believes that the grave from Drawsko differs from Wielbark Culture rules with regard to its alignment and it is difficult to precisely define its chronology — Margos 2000, 263.

[212] See Kontny forthcoming b.

[213] Kaczanowski and Zaborowski 1988, 232 fig. 8:B.

[214] e.g. Fântânele, Knyšivka, Krasnopol'e 1, Budeşti — Magomedov and Levada 1996, 304 figs 5:1, 3, 10, 16, with further reading.

[215] A detailed drawing in Jahn's archive offers the dimensions of the artefact: butt height 2.5 cm, cutting edge width 4.5 cm, and total length 11.5 cm. It was also said that the find had been provided with the inventory no. 14938 and had been covered with a fire patina (which demonstrates that it came from a cremation grave).

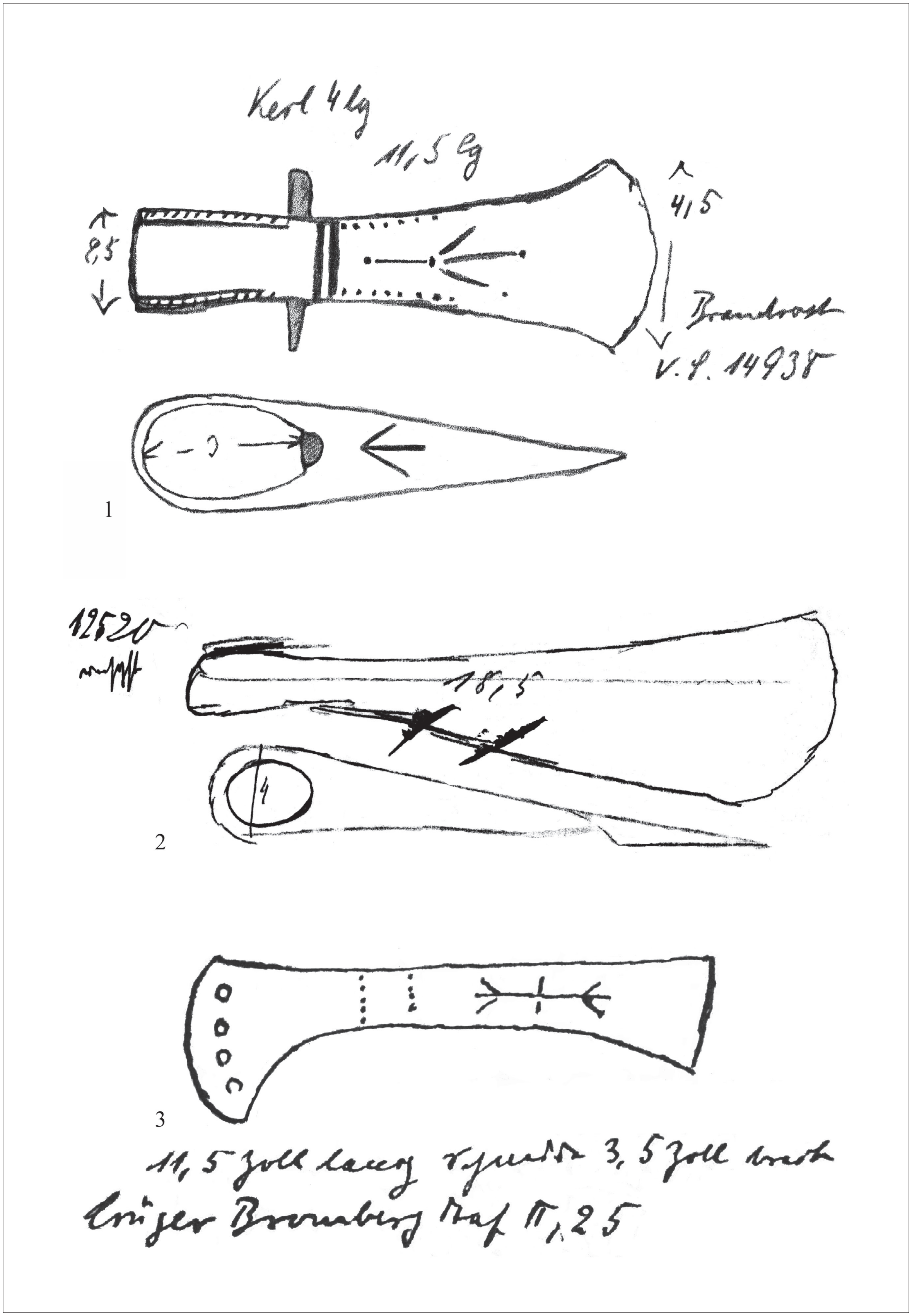
Kerl 4 lg
11,5 lg
8,5
4,5
Brandrost
V.S. 14938
1
12520
18,5
4
2
3
11,5 Zoll lang vorne 3,5 Zoll breit
Crüger Bromberg Taf II, 25

Figure 3.17. Oksywie Culture and Wielbark Culture axes. 1–2 — Skowarcz, 3 — Piła (after Jahn's heritage).

originally been a wedge which fastened the axe's haft.[216] It was not part of the axe-head, and published images are confusing with regard to that. Another distinctive trait is its ornament in the shape of engraved lines along the lower and upper edge of the butt, as well as diagonal incisions in the space between the lines and the edge; a pair of vertical lines was placed on the axe's neck, and in the central part of the axe-head, near the lower and the upper edge, there is an ornament composed of dots. Between them a motif of lines and points was placed, which resembles an impression of a bird's foot. A similar pattern (without the opposing line) can be found in the upper part of the blade and both motifs perhaps stand for a symbol of a forked lightning.[217] Kieferling dated this find to Phase B1, but without giving any reason.[218] On the other hand, Kaczanowski and Zaborowski assumed that there were no analogies for this ornament within the Oksywie Culture. Thus, it would be justified to relate this find to another ornamented artefact — the one from Piła (Fig. 3.17:3) — and date it to the Roman Period.[219] However, such a late chronology is not obvious either. With regard to its morphology, the discussed find is typical of the Pre-Roman Period. Its ornament, although also known in the Roman Period,[220] was recorded on Oksywie Culture clasps, too.[221] Therefore, in my opinion, there are no grounds to reject the Oksywie Culture provenance of this find, which was already proposed by Dietrich Bohnsack.[222] This supposition is not contradicted by the discovery of the aforementioned ornamented axe from Piła from Crüger's collection.[223] A sketch in a card from Jahn's files is very schematic and it does not allow for a meticulous typological analysis, although the dimensions of the find were given (length 11.5, width 3.5 inches). Jahn's sketch is a direct redrawing from the work of Crüger,[224] as implied by all the details. It is highly significant that the artefact — considered to be a steel hammer that was an offering tool — was found in a local peat bog. It was not strongly corroded, analogously to finds from Nydam, as one learns from Crüger's letter to Wilhelm Schwartz[225] from 26 January 1875.[226] Therefore, it is quite probable that there is yet another Wielbark Culture bog site apart from Żarnowiec.

The discussed artefact was evidently slender, and the bottom part of the axe-head was lowered. In the cutting edge, there was an ornament of four circles located along the cutting edge, two vertical lines composed of dots on the axe's neck, and a double motif of a bird's foot near the butt. A similarity in the ornamentation of the axes from Piła and Skowarcz was also noticed by Jahn, who recorded analogies on both cards.[227] This, however, does not mean that both axes come from the same period. They certainly represent different forms, but it is difficult to draw any deeper conclusions on the basis of the schematic image. It is probable that the find in question is a Roman Period artefact. It resembles Type Oder-Elbe according to Kieferling which appeared in Phases C–D.[228]

An axe with a fan-shaped symmetrical cutting edge from a possible bog deposit in Żarnowiec (Fig. 3.2:6) of probable Wielbark Culture provenance was classified as Type Żarnowiec.[229] However, the type itself was not defined in a satisfactory manner. It is not dated precisely (from Phase B2 to Phase C2, but mainly the Younger Roman Period), and similar forms were sporadically found in the Przeworsk Culture, more often in the West Balt zone,[230] but also in the Černâhov Culture.[231]

Yet another axe that was believed to be a Wielbark Culture artefact is a find from an urn grave in former Rohrwiese. This axe is known from Jahn's archive records.[232] The present-day name of the locality is Niekursko, Czarnków-Trzcianka District, and a considerable part of the grave furnishings survived, though this does not, regrettably, apply to the axe. Apart from the axe, classified as the western series of Group Kieferling 5,[233] the assemblage included an urn, an iron comb, a leaf-shaped arrowhead, an adze, a key, two knives, and scissors. The urn fits within the stylistics of the so-called *Schalenurnen* from the territory of Saxony and Mecklenburg. Due to this, Kokowski, who prepared a new work on these finds, interpreted this urn as a testimony of migrations of people from Saxony to the east in Phase C2.[234] No matter how one explains the presence of the grave with an axe, which is atypical for the Roman Period in this region, this feature is not related to the Wielbark Culture but to its western neighbour, the Dębczyno Group. This group was a separate cultural formation in the Younger and Late Roman Period, and in the Early Migration Period.

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[216] Bohnsack 1938, 71 n. 3. M. Jahn noted: 'Keil 4 lg'.

[217] Lightning-like marks of various kinds were popular motifs in weaponry ornaments, with special reference to shafted weapon heads, cf. Chapter 2.

[218] Kieferling 1994, 353.

[219] Kaczanowski and Zaborowski 1988, 232 fig. 8:C. The redrawing in this work erroneously depicts an iron wedge.

[220] See a shafted weapon head from Stenstugu in Gotland, dated to Phase B2 — Almgren and Nerman 1923, 117, 125 pl. 42:601; Kaczanowski 1988, 58–59 fig. 3:2.

[221] Warszkowo, Grave 88 (both a motif in the shape of a complete impression of the bird's foot and in its reduced form) — Eggers and Stary 2001, pl. 195:1. This buckle belongs to Type VD and is dated to Phase A3 — Wiloch 1995, 16, 40.

[222] Bohnsack 1938, 71.

[223] Kaczanowski and Zaborowski 1988, 232 fig. 8:E; 'Verzeichnis der Antiquitäten', 222.

[224] Cf. Crüger 1872, pl. II:25; after Kaczmarek 1988, fig. 3.

[225] Director of Friedrich-Wilhelm Gymnasium in Poznań in the years 1872–1882 and a member of the Berlin Anthropological Association. He was gathering materials for an archaeological map of the Greater Poland, see Kaczmarek 1998, 327; see also Kaczmarek 1997.

[226] Correspondence survived in the archive of the Archaeological Museum in Poznań, cf. Kaczmarek 1998, 333 fig. 2. Kaczmarek assumed that in this letter the find place was referred to as Fulmen but obviously the phrase 'Hammer mit dem Fulmen' means that the axe was ornamented with the bolt image (Latin *fulmen*).

[227] Piła: 'vgl. ganz ähnlich Schönwarling'; Skowarcz: 'vgl. ganz ähnlich Schneidemühl!!'.

[228] Kieferling 1994, 339 fig. 4.

[229] Kieferling 1994, 341–43.

[230] Kontny 2006, 148–49 figs 1:F, 2.

[231] Cf. Magomedov and Levada 1996, fig. 5:1, 13.

[232] Jahn's heritage; Kaczanowski and Zaborowski 1988, 232 fig. 8:D.

An Oder-Elbe type axe was hauled up from the waters of Lake Krępsko in the Krajeńskie Lakeland (Pomerania), close to a peninsula at Krępsk, Człuchów District, during an archaeological survey carried out by scholars from the Nicolaus Copernicus University in Toruń.[235] It was found next to two spearheads (one of them most probably dated to the turn of the Early and Younger Roman Period) and an early medieval sword.[236] One of the spearheads[237] resembles some early medieval artefacts but also items attributed to Type Kaczanowski XV, known from Subphase B2b until Subphase C1b, but most popular in Subphase C1a.[238] In fact, it cannot be assigned to Roman Period forms as the lower parts of its blade's edges are thick, which is a non-protohistoric trait.[239] This problematic identification is also a result of an imprecise drawing,[240] ignoring the socket with facets and profiled blade.[241] The axe was erroneously linked with the Middle Ages,[242] whereas it is a typical Roman Period form.[243] The artefact's cultural affiliation is not completely clear. It may be related to the Wielbark Culture, and a settlement of this cultural unit — Krępsk, Site 13 — was recorded on the opposite shore of the lake[244] (*c.* 500 m north-west as the crow flies).[245] However, the area was abandoned by its Wielbark Culture population at the beginning of the Younger Roman Period, and a new phenomenon, the Dębczyno Group, appeared at the turn of Subphases C1a and C1b.[246] Therefore, one cannot exclude a connection with the latter — taking into account a quite long chronology of the type, which encompassed the entire Younger and Late Roman Period.

There are even more axes which should be attributed to the Wielbark Culture.[247] These are stray finds from Świerże, Chełm District,[248] vicinity of Osuchy and Podsośnina, Biłgoraj District,[249] Mielno, Ostróda District,[250] possibly also Żuków, Zamość District[251] and one from Charlęż, Łęczna District[252] declared as found close to the Bystrzyca River or a bog find discovered in Komarów-Osada, District Zamość.[253] One may possibly consider the Masłomęcz Group find from Gródek, Hrubieszów District too.[254]

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[233] Kieferling 1994, 343 fig. 7:4.

[234] Kokowski 2006, 132–33 photo 5 figs 1, 3.

[235] Chudziak and others 2016, 72 fig. 56:c.

[236] Chudziak and others 2016, 72–75 figs 56:a–b, 57.

[237] Chudziak and others 2016, fig. 56:a.

[238] See Kaczanowski 1995, 23 pl. XII:3.

[239] Kontny forthcoming a.

[240] See Chudziak and others 2016, fig. 232.

[241] As it is shown herein, the classification of the Przeworsk Culture pole weapon heads (to which one may attribute spearheads) is adequate here, as in the case of the Wielbark Culture the armament types of the Przeworsk Culture prevailed in the Early Roman Period until Subphase C1a, see Kontny 2019f, 89–90.

[242] Chudziak and others 2016, 72, 75.

[243] See the analogous finds from Lubanowo and Piła. In theory, one may attempt to relate them to Variant IB.3.27 — see Kotowicz 2018, 69. However, if compared to Type Elbe-Oder artefacts with lower widenings at the shaft-hole (Kieferling 1994, fig. 4), their Roman Period origin seems more probable.

[244] See Chudziak and others 2016, fig. 51.

[245] Another phenomenon typical of the Wielbark Culture is that from Krępsk, i.e. the necropolis with stone circular constructions — Kokowski 2012.

[246] Machajewski 1992, 165.

[247] See Kontny forthcoming b.

[248] Subtype II.2 after Kontny (2018a), i.e. a form characteristic mostly of the Younger Roman Period, thus the times in which the area was occupied by the Wielbark Culture peoples. Personal communication: Dawid Rembecki, MA — a PhD student from the University of Warsaw.

[249] Type Leśnica after Kieferling (1994, 339 fig. 5), dated to Phases C2–D1 when the region was settled by the Wielbark Culture peoples. Personal communication: Artur Proć from the Biłorajska Land Museum in Biłgoraj.

[250] Personal communication: Piotr Kotowicz, PhD from the Museum in Sanok. It is a stray find found in 2008, stored in a collection of the Museum of Warmia and Mazury in Olsztyn, inv. no. 1958, cat. no. 5108. The form resembles the western Series of Group 5 after Kieferling (1994, fig. 7) and has good parallels in Scandinavian war booty offering at Illerup (Place A dated to the early stage of Subphase C1b), inv. no RTY and AAMC (Pauli Jensen and Nørbach 2009, 261, 287).

[251] Type Żarnowiec after Kieferling (1994, 341 fig. 6) or II.2 after the author (Kontny 2018a), which is broadly dated to the times of both Przeworsk Culture and Wielbark Culture occupation of the land.

[252] Group 5, western Series after Kieferling (1994, fig. 7). Personal communication: Dawid Rembecki.

[253] Type Leśnica after Kieferling (1994, fig. 5). Personal communication: Dawid Rembecki.

[254] Niezabitowska-Wiśniewska and others 2021, 53, 328, 330, 331 fig. 87, pl. VI.48. It belongs to the eastern Series of Group 5 after Kieferling (1994, 343 fig. 8) or Type 6a after Arvydas Malonaitis (2008, 53, 298) so forms typical of the Balt milieu. Thus one may date it to the Late Roman and Early Migration Period but also to the later stages, even the Middle Ages. Due to its broad chronological framework the connection with the final stage of the Masłomęcz Group is at most hypothetical (Kontny forthcoming b).

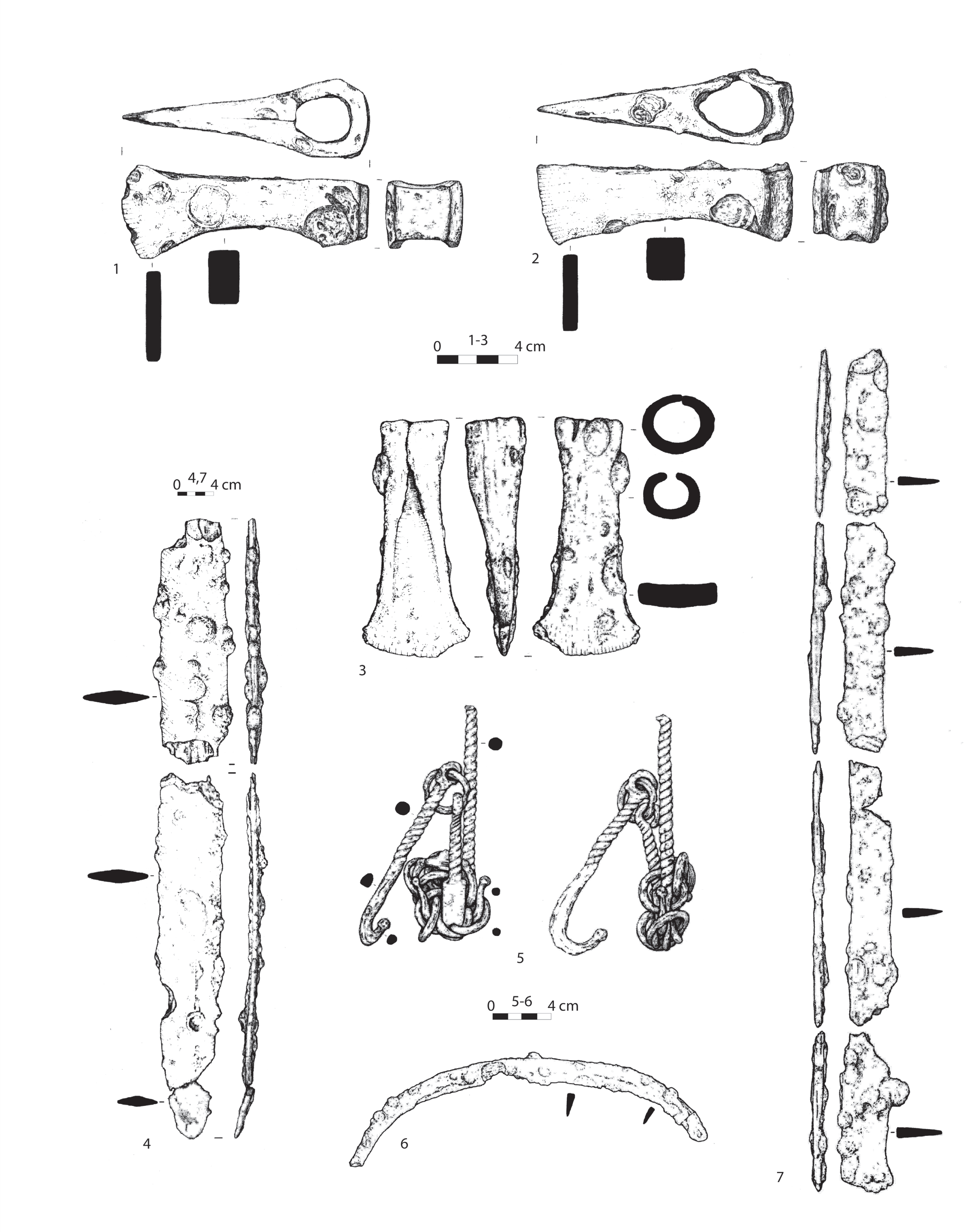
1
2
0 1-3 4 cm
3
0 4,7 4 cm
4
5
0 5-6 4 cm
6
7

Figure 3.18. Selected items from the deposit found at Stare Dłusko (after Rembecki 2019, figs 23, 24, 26–30).

The possibility that the list of Wielbark Culture axes should be completed with finds from Lake Lubanowo in the locality of Lubanowo (former Liebenow), Gryfino District cannot be excluded. It has been methodically surveyed annually since 2014 by a team of underwater archaeologists from the Institute of Archaeology (now: Faculty of Archaeology), University of Warsaw, formerly featuring the Institute of Archaeology and Ethnology, Polish Academy of Sciences.[255] During underwater research, weapons (i.e. spearheads, javelin heads, an apex of a shield boss, and an arrowhead), horse harness elements (including chain reins), potsherds, and tools have been found. Among them, two axes of types Żarnowiec and Elbe-Oder (Fig. 1.11:7–8) should be mentioned. The deposits are dated mainly to the Roman Period, from Phase B1 to C1b.[256] This site is located beyond the territory of the Wielbark Culture. However, axes are absent in local cultural contexts (burial grounds and settlements of the Lubusz Group). Therefore, it is possible that these are booty weapons, taken from Wielbark Culture invaders and deposited as an offering.

The fact that axes were more popular in Pomerania and in western Poland than previously believed seems to be also implied by wetland deposits of iron artefacts (carpentry, metalworking, and agricultural tools, as well as axes) from Czarnkowo (former Zarnekow), Białogard District.[257] In this case, the data is much more comprehensive. The finds included iron tools like pliers, hammers, adzes, half-scythes, an anvil, scissors, augers, chisels, and three axes (one of them of Type Oder-Elbe, one close to it, and the last small and asymmetric), found in the bog, which is still recognizable as a depression in the ground. Furthermore, in Stare Dłusko, Międzyrzecz District in the Land of Lubusz, western Poland (Fig. 3.18)[258] two axes (one also of the Oder-Elbe type), fragments of single-edged swords and a double-edged one, as well as tools (adzes, a half-scythe, possibly an auger), and a suspension set of a Roman cauldron were acquired by an amateur detectorist, on the wet surface of a flood terrace of the Warta River. Both sites are dated to the Roman Period: the former perhaps to its younger phase (C), the latter to the turn of the Early and Younger Roman Period. Their cultural affiliation is unclear. In the case of the deposit from Stare Dłusko, this lack of clarity results from the peripheral location of the discovery place.[259] As regards Czarnkowo, one may link the deposit with the Wielbark Culture — assuming that the chronology is the late stage of Phase B or the very beginning of the Younger Roman Period — or with the Dębczyno Group, provided that the assemblage is dated to the later stages of Phase C.

Therefore, it seems justified to assume — at least with regard to the Younger and Late Roman Period — that axes were 'national weapons' of the Wielbark Culture. This is also indirectly implied by their presence in the related Černâhov Culture, where asymmetrical forms seem to be the most popular.[260]

The majority of the Wielbark Culture axe-heads date to the Younger and Late Roman Period as well as the Early Migration Period with a territorial range characteristic of these phases. Early Roman Period items are almost lacking, which makes the hypothetical influence of the Late Pre-Roman military model (the Oksywie Culture) improbable. The same is true for the Przeworsk Culture as its military standard did not include axes. Therefore the introduction of axes may result, i.a. from the shift of the territory and the emergence of immediate proximity between the Wielbark Culture and the West Balt Circle in the Younger Roman Period. It seems probable that Wielbark Culture axes had been borrowed from the West Balt Circle and then became a typical element of warriors' panoply.[261]

Arrows

Arrowheads are found very sporadically. These are almost always leaf-shaped artefacts with sockets, usually not fully forged, as seams are clearly visible. It is necessary to mention finds from Kitki, Mława District, where a pair of such arrowheads was found in an inhumation grave of a boy aged about ten under a stone barrow. These arrowheads were made of copper alloy and were 8.6 and 9 cm long. The remains of shafts were still present in their sockets (Fig. 3.19).[262] The assemblage can be dated to Phase C2 on the basis of a H31-type buckle according to Renata Madyda-Legutko.[263] Singular bronze leaf-shaped arrowheads were also found in Graves 1 and 18 in the women's necropolis in Brulino-Koski, Wysokie Mazowieckie District.[264] Their chronology generally falls within the Younger Roman Period, as there are no precise time markers among accompanying finds.

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[255] Nowakiewicz 2016a, 17–20; Brzóska and Kontny 2016.

[256] Kontny 2016a, 292–94.

[257] Eggers's heritage, file *Kreis Belgard*; see Rembecki 2019, 17–18, 31, 34 fig. 6:2; Kontny 2022, 91. I would like to thank Krzysztof Kowalski and Bartłomiej Rogalski, PhD from the National Museum in Szczecin for this data.

[258] Rembecki 2019; Kontny 2022, fig. 9.

[259] Rembecki 2019.

[260] See Magomedov and Levada 1996, 307–08 fig. 5.

[261] Kontny forthcoming b.

[262] Kempisty and Okulicz 1965, pl. 94:2.8–9, fig. 9:g, 30.

[263] Madyda-Legutko 1986, 68.

[264] Kempisty 1968c, 411, 418–19 figs 4:g, 30:b.

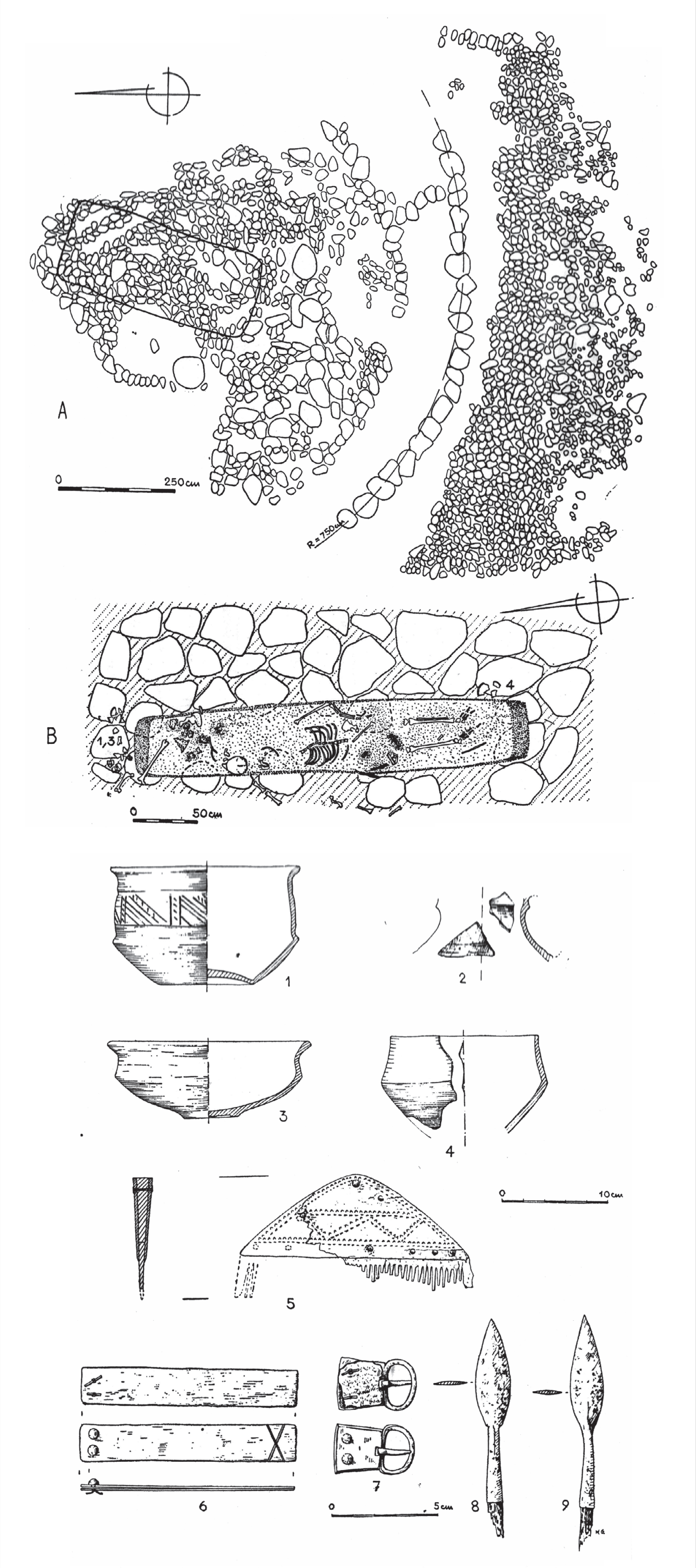

Figure 3.19. Inhumation grave from Kitki with bronze arrowheads (after Kempisty and Okulicz 1965, pl. 94.2:8, 9).

Only in the case of Grave 1 can the earliest stage of the Younger Roman Period possibly be excluded. This is because a steeply bent bow of an Almgren VI fibula was found there, and this trait occurred from Subphase C1b or even C2.[265] This list can be completed with two arrowheads from Piła, which are known from a mention in Jahn's files in the aforementioned card.[266] One of these arrowheads was perhaps leaf-shaped, with a socket (which may be inferred from a remark mentioning a seam on the socket). It seems that these finds were made of iron — had bronze been used, Jahn would probably have recorded this in the card, where a number of iron weapons were included.[267] It is also necessary to mention a small bronze arrowhead with barbs, which should be classified as a Lusatian Culture find. It was found in the vicinity of Piła and it was part of the aforementioned collection of Crüger.[268] A sword and an axe from the same collection were also mentioned by Jahn; however, they have no inventory numbers. It is probable that arrowheads recorded in the Berlin museum's inventory cannot be related to the collection of the building counsellor.

The literature also mentions a stray find of an arrowhead from Skowarcz.[269] However, Jahn's archive, which is quoted by the authors of this publication, does not contain any data on it. It is possible that what was taken for an arrowhead was indeed a shafted weapon head no. 12 972, with the following dimensions: '9: 5: 9.5'. In such a case, it would be a mistake, because according to Jahn's recording system the artefact's width would exceed its length. However, this artefact is certainly not an arrowhead, as rivet openings were marked in the sketch, and in the discussed period arrowheads were fixed on shafts solely by means of pushing them on. What is more, the lack of exact context of discovery suggests that this find can be linked with the Oksywie Culture phase of the necropolis. Furthermore, the find from former Rohrwiese should also be removed from the list of arrowheads related to the Wielbark Culture, as this is in fact a Dębczyno Group artefact.[270]

The same applies to stray finds of arrowheads from Poznań-Szeląg, which should rather be linked with the period (commencing with Subphase C1b) in which the cemetery was used by the Przeworsk Culture.[271]

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[265] Nowakowski 2001, 133.

[266] '2 kl. Pfeilspitzen eine mit Schlitztülle II 10 820 h–i.'

[267] Kaczanowski and Zaborowski do not quote the handwritten note of Jahn, and they solely mention 'arrowheads' (?) — Kaczanowski and Zaborowski 1988, 224.

[268] 'Verzeichnis der Antiquitäten', 221 pl. XXV:7.

[269] Kaczanowski and Zaborowski 1988, 233.

[270] Cf. Kaczanowski and Zaborowski 1988, 233; Kokowski 2006, 132 photo 5:b figs 1, 3:f.

[271] Gałęzowska 2007, 163.

Yet another example of an arrowhead which was erroneously related to a Wielbark Culture grave is a barrow from Debrzno-Wieś (former Dobrin), Złotów District. In this burial chair-shaped spurs were found, which were originally believed to be shield parts.[272] An artefact from Grave 176 at Chełmno, dated to the beginning of the Roman Period and classified as an arrowhead,[273] is in fact a small shafted weapon head.[274]

Some arrowheads which were classified as Wielbark Culture[275] or Masłomęcz Group artefacts — small bronze items with sockets and barbs — are in fact of Bronze Age origin (Lusatian Culture)[276] and were discovered as stray finds or within secondary deposits.[277]

This verification does not lead to very optimistic conclusions. In effect, only the finds from Brulino-Koski and Kitki (and possibly from Piła) can be considered Wielbark Culture artefacts. It must be noted here that bronze arrowheads could not have been used in combat due to their considerable material value. It is probable that — as in the case of silver arrowheads from 'princely' graves — they had a symbolic significance. They may have been figuratively related to earthly pastimes of Germanic elites (alongside elements of wine-drinking kits and gaming tokens which are sometimes found in splendid graves).[278] They may thus demonstrate higher social status or military rank. Another possible function is that of amulets (in the case of finds from women's graves).[279] There is no doubt that the finds from the grave at Kitki, which stands out with regard to its splendid form, can be compared to symbolic silver arrowheads from 'princely' graves of the Hassleben-Leuna-Zakrzów horizon; they are even dated to the same period. However, it is not very probable that the arrowheads' presence can be explained by Elbe Germanic influences, as has been recently proposed.[280]

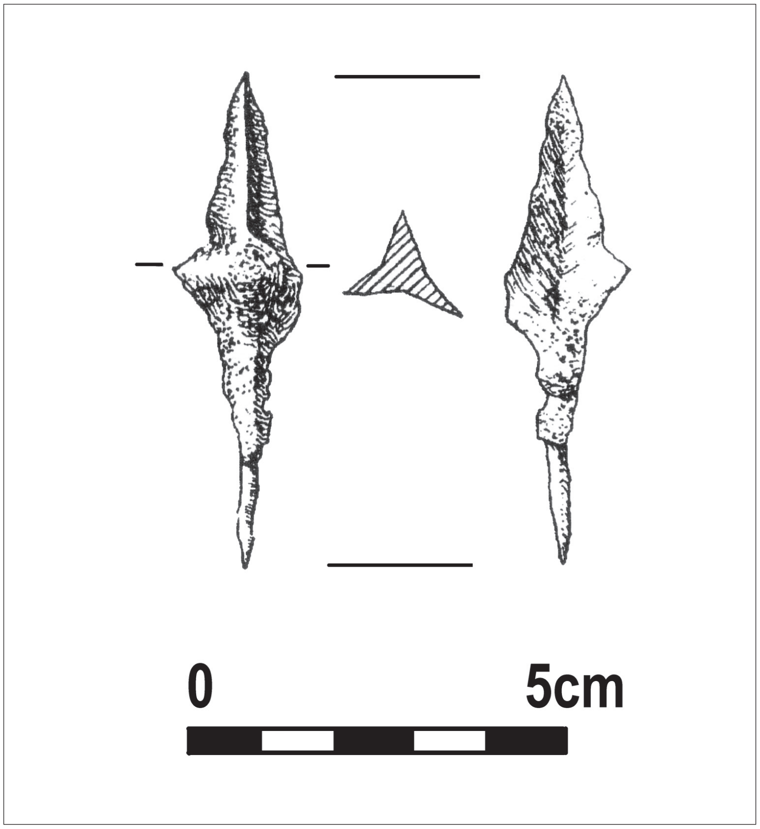

Figure 3.20. Trilobate arrowhead of a nomadic type from Cecele, Siemiatycze District (after Jaskanis 1996, pl. LXXIX:14).

Leaf-shaped arrowheads cannot be considered weapons in a strict sense. Such artefacts were not very effective in combat and they were generally more suitable for hunting.[281] This cannot be said about the last artefact from the list of Wielbark Culture arrowheads which was discovered as a stray find in the necropolis in Cecele, Siemiatycze District. This burial ground is dated between the Younger Roman Period and Early Migration Period (Fig. 3.20).[282] The find in question is made of iron. It has three rhombic blades and a tang.

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[272] Gałęzowska 2007, 175, 191; Blume 1915, 145.

[273] Kaczanowski and Zaborowski 1988, 232.

[274] Kaczanowski and Zaborowski mention another two artefacts from Elbląg-Pole Nowomiejskie (former Neustädterfeld), making a reference to Jahn's archive — Kaczanowski and Zaborowski 1988, 233 n. 1. Unfortunately, it proved impossible to find the relevant card. However, bearing in mind a number of aforementioned misunderstandings related to the use of the famous arms and armour researcher's legacy, one needs to be careful while attempting to relate these finds to the Wielbark Culture.

[275] Kokowski 1995, 57.

[276] Cf. Types I–IV according to Fogel 1979, 112–15 pl. XII:1–8.

[277] Uniejewo, Płock District, stray find — Hahuła 1988, 91 pl. VI:8l; Wierzbno, Pyrzyce District — Rulewicz 1973, 109, 111 figs 2:2, 3:1; Gródek nad Bugiem, Hrubieszów District, Grave 162 (this grave was strongly disturbed, so the arrowhead was not necessarily located in its fill but may have got there as a result of secondary processes), cf. Kokowski 1993, 111 fig. 136:c.

[278] Schulz 1953, 49–50.

[279] Skóra 2015, 165–67, 297, with further reading. A majority of ideas proposed by this researcher aimed at the reconstruction of arrowhead symbolism must remain theoretical constructs, especially in view of the fact that the catalogue of finds is so strongly reduced.

[280] Jílek and Horník 2017, 88. Graves with leaf-shaped bronze arrowheads were quite abundantly recorded in Phases C2–C3 in the territory of eastern Elbe River Basin, see Jílek and Horník 2017, 75–76 figs 9:1–2, 10:1–2.

[281] See Chapter 2. It must be noted that some bronze arrowheads which are found in Barbarian graves were made from very thin metal sheets, see e.g. Jílek and others 2017, 500–01 figs 2:2–3; 4, 7. Thus, such artefacts could not have been used even for hunting purposes (this observation does not apply to the Wielbark Culture, where arrowheads were much more robust).

[282] Jaskanis 1996, 110–12 pl. LXXIX:14.

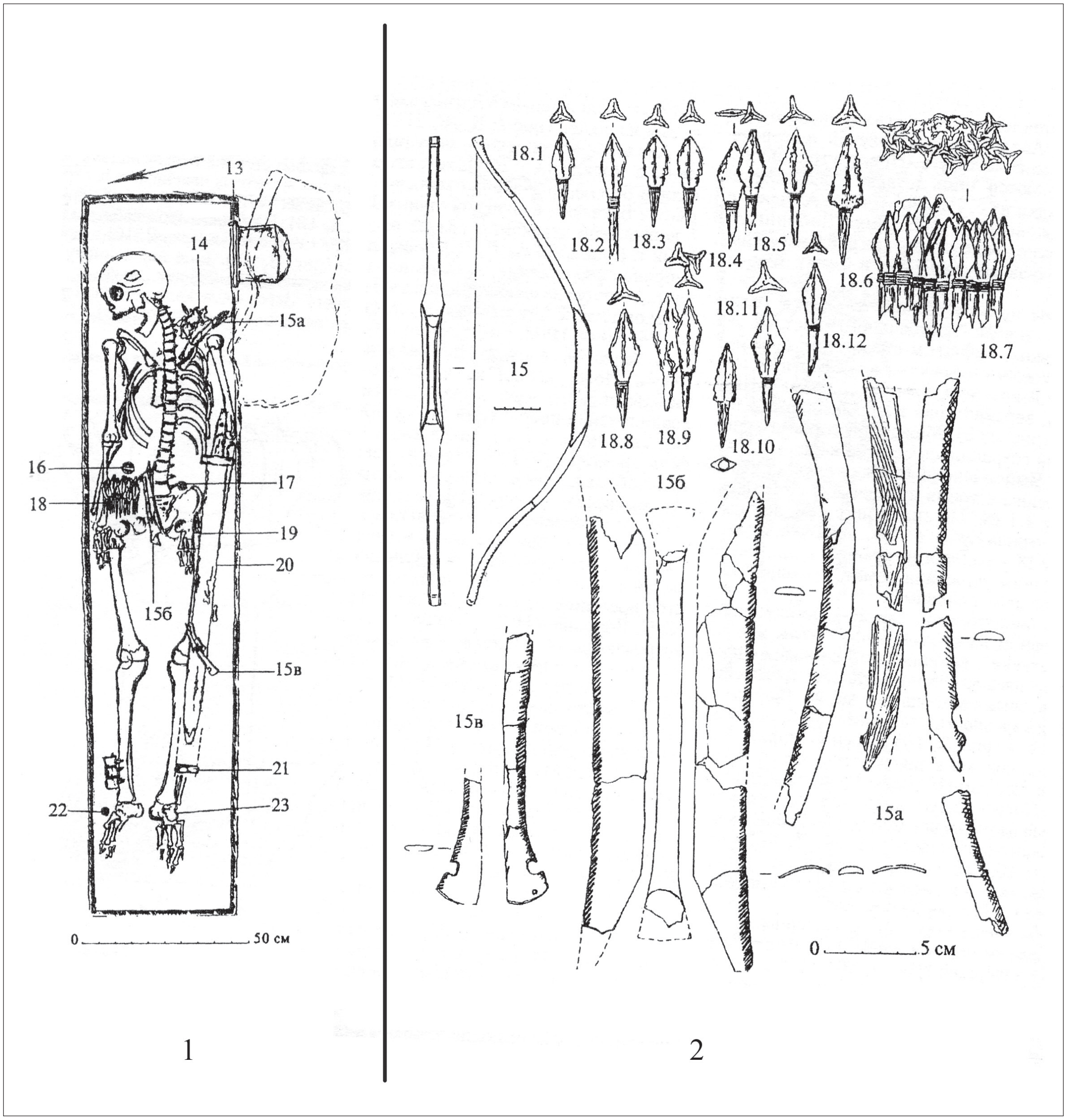

Figure 3.21. Burial of a Hunnic archer from Ust'-Al'ma, Grave 635 in Crimea. 1 — plan of the grave, 2 — bone scales, trilobate arrowheads and a reconstruction of the bow (after Puzdrovskij and others 1999, figs 2, 5).

It is not the only find of that kind in the Polish lands. Similar artefacts were recorded in a Przeworsk Culture refugium-type settlement in Podzamcze-Góra Birów, Zawiercie District.[283] Finds of this kind are also known in the Balt milieu, including the territory of Poland, i.e. the Sudovian Culture and perhaps the Bogaczewo Culture.[284] This form is typical of the Hunnic period (Fig. 3.21). It originated in the nomadic world, but was adopted by the Germans and was still used by them after the fall of Hunnic rule in Europe. The existence of such artefacts in a military context was confirmed in Lithuania, particularly in strongholds and their ramparts. Considering the context of the occurrence of trilobate arrowheads, their presence was explained by the presence of the Huns, who were believed to have attacked the current territory of Lithuania from their bases in present-day Poland. However, trilobate rhombic arrowheads are well known in eastern Europe — in the Kyiv Culture, the Moščino Culture, in the Dnieper Balt milieu, among Type Čertovickoe III finds on the

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[283] Muzolf 1997, pl. VI:8, 9.

[284] Cf. Chapter 4.

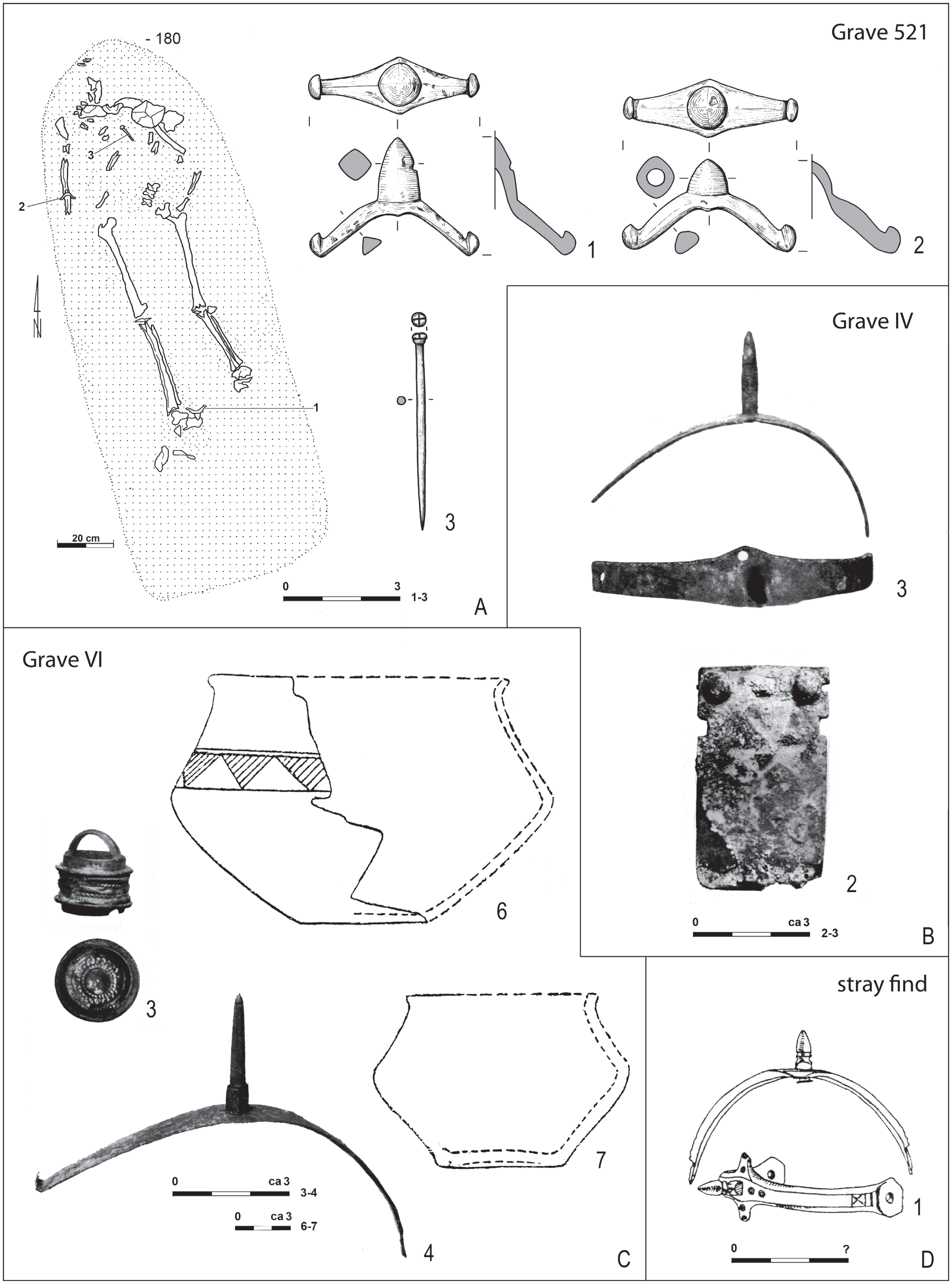
Grave 521
- 180
3
2
1
20 cm
1
2
3
0
3
1-3
A
Grave IV
3
2
0
ca 3
2-3
B
Grave VI
6
3
4
7
0
ca 3
3-4
0
ca 3
6-7
C
stray find
1
0
?
D

Figure 3.22. Spurs from the territory of the Wielbark Culture in Weklice (A–C) and Myślęcin (D) (after Kontny and Natuniewicz-Sekuła 2010, fig. 1).

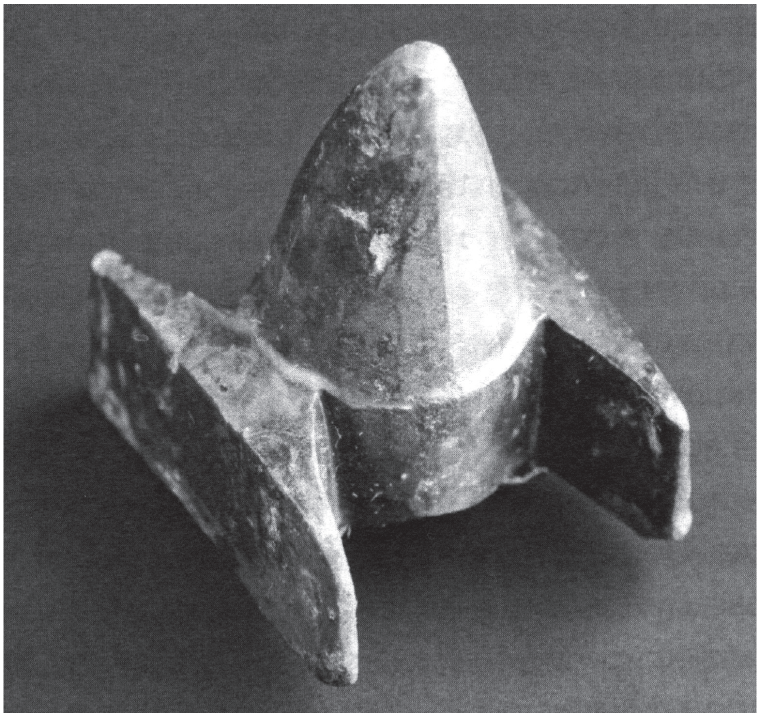

Figure 3.23. A chair-shaped spur from the necropolis of the Wielbark Culture in Czarnówko (after Schuster 2014, fig. 35).

upper Don, as well as in the Pontic zone (the Cebelda Culture in Abkhazia). It is therefore unnecessary to refer to improbable concepts. There are no grounds to believe that the territory of current Lithuania was a particularly attractive area for plundering expeditions of the Huns, who were successfully pillaging provinces of both Roman states. The contexts in which the discussed arrowheads occur in the east usually do not suggest military reasons behind the deposition circumstances (they were discovered in e.g. in the cultural layers of houses or settlements); this implies that the invaders were rather eastern neighbours who attacked the territory of today's Lithuania.[285] It seems that the arrowhead from Cecele should be related to the fact that the Wielbark Culture population adopted some nomadic ways of combat at the beginning of the Migration Period. On the other hand, the scope of such inspirations was perhaps limited, as was the case with other East Germanic peoples. Ideas that may have been adopted include — apart from the bows and arrows — double-edged swords (so-called Asian type *spathae*), single-edged narrow seaxes, and parts of riding gear. This, however, does not mean adoption of the nomadic combat style.

Riding Gear

The only category of weaponry that is abundantly present in the Wielbark Culture are spurs, most commonly made of copper alloys. They occur throughout the entire period of this cultural unit's existence. In the Early Roman Period and the beginning of the Younger Roman Period it is possible to point out many references to patterns known from the Przeworsk Culture, that is, Subgroups Ginalski C1 (Fig. 3.16:1), E (Figs 3.15:12–13; 3.22.521:1–2), and F. At the same time, chair-shaped spurs were popular (Fig. 3.23). These were mainly widespread in the Elbe Germanic zone and in northern Europe. This situation changed in the Younger Roman Period — there are many unique forms which have no analogies in the Przeworsk Culture or in Scandinavia. Some types are somewhat inspired by Przeworsk Culture prototypes but are greatly transformed according to local fashion (e.g. artefacts with band-like yokes). At the end of the Roman Period, an influence of Roman patterns becomes significant (Figs 2.24, 3.22:IV.2, VI.4).[286]

Three finds of Type Vimose chain reins and mouthpieces can be hypothetically pointed out in the territory of the Wielbark Culture. These were ornamental artefacts (copper alloy, of which rein links and some parts of horse headgear were made, was supposed to imitate gold) and they marked their owner's high status. However, they also had a utilitarian function — it was much more difficult to cut through such reins and thus deprive the rider of control of the horse than in the case of leather reins. The first artefact which is perhaps of Wielbark Culture provenance is a river find (possibly a ritual deposit, as in the case of river finds in Mecklenburg[287] or from the Váh River in Hlohovec, Slovakia)[288] hauled up from the Bug River near Kamieńczyk, Wyszków District (Fig. 3.24).[289] The other find is known from Żabin, Drawsko Pomorskie District (Fig. 3.25), but the circumstances of discovery are unknown.[290] Both artefacts can be dated to Phase C1,[291] solely on the basis of analogous finds from well-dated contexts. However, the Wielbark Culture provenance of these finds is not quite certain. In the case of the discovery from Kamieńczyk, if the headgear was deposited in the

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[285] Bitner-Wróblewska and Kontny 2006.

[286] Kontny and Natuniewicz-Sekuła 2010, 338–39; 2013, 23; Kontny and Michalak 2021, 504–12; Kontny in preparation b; cf. Smółka 2014, 48–51, 57 fig. 1; the latter work contains many premature general conclusions. These result first of all from the fact that the catalogue of finds is incomplete and sometimes erroneous. This is especially notable in regard to the West Balt zone.

[287] Wilbers-Rost 1994, 118–20.

[288] Daňová and Daňová 2019, 136 fig. 3.

[289] Baranowski 1973, 419, fig. 18; Wilbers-Rost 1994, 189.

[290] Baranowski 1973, 419, fig. 7:3; Wilbers-Rost 1994, 192 pl. 6:B; Jahn's heritage.

[291] Wilbers-Rost 1994, 121, 127.

Bug River at the beginning of said phase, it could have been a testimony to some surviving traditions of the Przeworsk Culture. However, these lands were settled by the Wielbark Culture as early as the beginning of the Younger Roman Period. Therefore, a relationship between the discussed find and this culture seems to be the most probable. As regards Żabin, it seems possible to relate the find to the Dębczyno Group. However, this group does not come into existence until the late part of Subphase C1a. As a matter of fact, Dębczyno Group graves are not very numerous even in Subphase C1b. Therefore, it seems justified to date the find to the transitional period, which allows it to be linked to any of these cultural units, although its Dębczyno Group provenance seems to be most probable.

Another acorn-shaped chain-rein link (Type Z4 after Wilbers-Rost) comes from Gulb, Iława District in Iława Lakeland. It is broadly dated to Phases B2b–C1, i.e. the period of Wielbark Culture settlement in this region. Unfortunately, it is a stray find.[292]

The list of Goths' Circle riding gear finds from Poland can be (hypothetically) completed with a bronze fitting of chain reins from the hoard in Łubiana, and a cheekpiece of a nomadic type mouthpiece from Hrebenne. The latter find is dated to the Early Migration Period and originates from the territory of the Masłomęcz Group, which was already disappearing at this time.[293]

Helmet

A unique artefact was discovered in Swaryczów, Zamość District, in Feature 151 from Phase C2, where a child was buried. This is a fitting in the shape of an eagle's head, made from a thin gold sheet. It was considered to be an ornament of a Roman helmet.[294] Some parade or gladiator Roman helmets were in fact adorned with similar images, especially those of griffins.[295] One such helmet decoration is known from the *Barbaricum*, discovered at the bog site at Vimose on Funen. It is interesting that the Barbarians used the artefact in a secondary manner, i.e. as a military sign on a shaft with a blue and red flag.[296] A putative military sign in the shape of a vulture was discovered at another offering site in Czaszkowo, Mrągowo District.[297] In this case, however, the bird figurine could not have originally been used as part of a helmet. In spite of morphological similarity, it is rather improbable that the find from Swaryczów was originally intended to be part of a helmet, due to its fragility. Even if it was, some kind of substance which absorbed external impacts on the sheet must have been used. All in all, this artefact was not used as protective armament and there is nothing to suggest that it was used by the Wielbark Culture population. It could rather demonstrate contacts with the Roman world, e.g. at the time the Goths waged wars in the south in the third century.

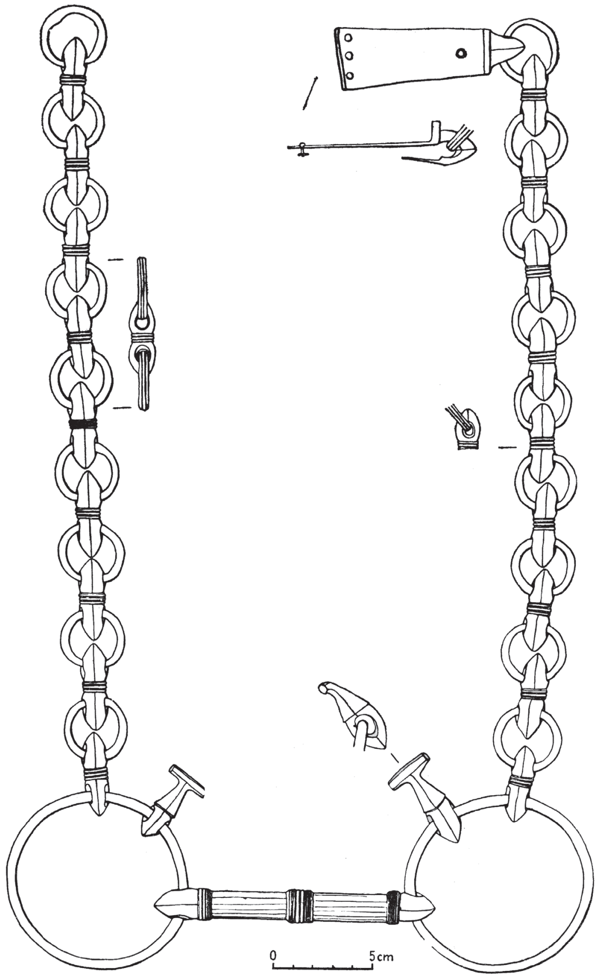

Figure 3.24. Horse mouthpiece with chain reins hauled up from the Bug River near Kamieńczyk (drawing Jerzy Okulicz, after Baranowski 1973, fig. 18).

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[292] Cieśliński 2019.

[293] Niezabitowska-Wiśniewska 2009, 202 fig. 23:2.

[294] Sadowski 2021, 254 pl. 30.

[295] This also applies to pseudo-Attic and pseudo-Corinthian parade cavalry helmets, which mainly occur in the third century — Fischer 2012, 210–13 figs 305, 307, 310; Bishop and Coulston 2006, 178 fig. 114:3–4, pl. 2:c.

[296] Pauli Jensen 2003, 237 fig. 12.

[297] Nowakiewicz and Rzeszotarska-Nowakiewicz 2012, 78–81 fig. 54.

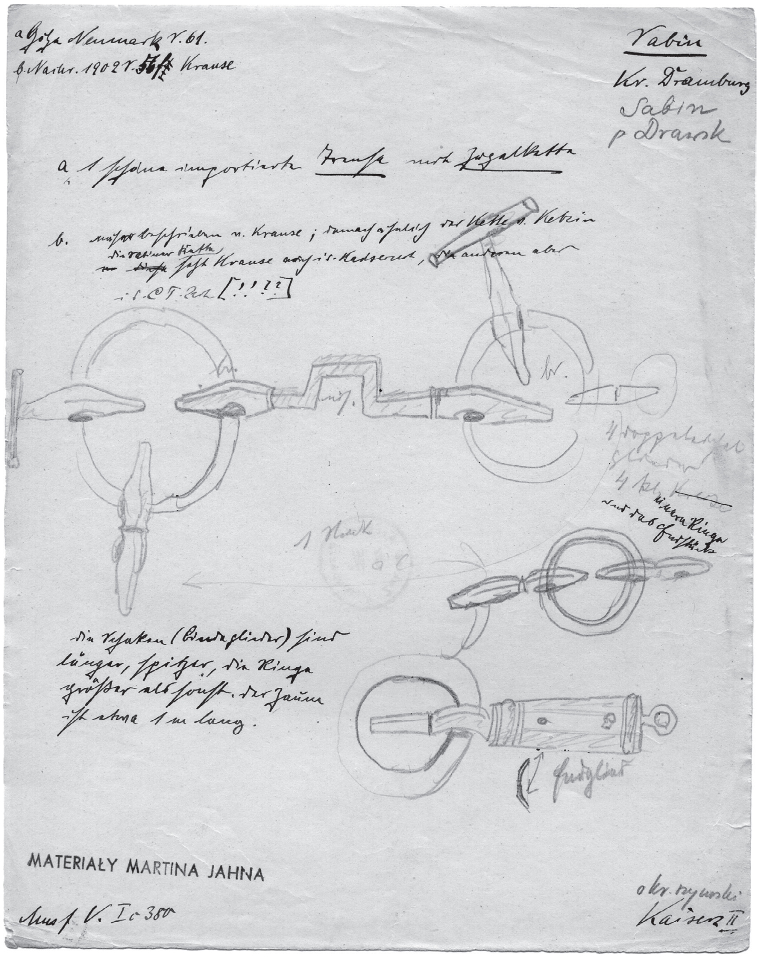
Zabin
Kr. Dramburg
Sabin
p Drawsk
MATERIAŁY MARTINA JAHNA
okr. drawski
Kaiser II

Figure 3.25. Card from Jahn's archive, concerning the finds from Żabin (after Jahn's heritage).

Armour

A grave (possibly inhumation burial) from Dobrocin, Ostróda District (former Gross Bestendorf), dated to Subphase C1b, contained a pair of spurs, a golden necklace, and a copper-alloy box-shaped circular artefact that was ornamented with a golden sheet. The sheet was decorated with a pattern of embossed concentric pseudo-pearl lines and silver rivets with profiled heads. The specimen was given a ledge with fastening for a horizontal axle — together, they formed some kind of a hinge (Fig. 3.26:3).[298] This artefact has been interpreted[299] as a belt fitting (part of an ornamentation of a warrior's belt), analogous to those found at the bog site in Ejsbøl, Komm. Haderslev, as well as in Grave 7 in the necropolis of Neudorf-Bornstein, Kr. Rendsburg-Eckernförde in Schleswig,[300] or as part of a Barbarian fastener of mail armour. So far, such a construction, composed of a pair of ornamental box-shaped elements joined with a clasp (sometimes covered with a decorative conical boss on a cylindrical flange) is only known from the bog site of Thorsberg, Kr. Schleswig-Flensburg (Fig. 3.26:1–2)[301] and from Hagenow, Grave II/1899 in western Mecklenburg.[302] The interpretation of this artefact as part of military belt fittings does not seem very probable due to its large size (5.5 cm in diameter, while belt fittings are considerably smaller) as well as an unclear manner of attaching it to a leather strap; however, it may be justified to assume that the discussed find is a fragment of a damaged mail armour fastener. This hypothesis is supported by the artefact's size, construction details, and ornamentation. Due to the fact that we deal with an incidental find, it is difficult to assess whether it was damaged and used in a new manner, e.g. as an ornamental pendant (of a *balteus*), or the grave originally contained a pair of complete fasteners with a mail shirt. The latter possibility, however, seems less probable, as iron was a taboo in funeral rites of the Wielbark Culture. All in all, the considered artefact was either imported, or inspired by north European patterns.

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Aside from the finds discussed earlier, one must also mention cemeteries with weapons on which there is no detailed data. Therefore, it is not possible to distinguish between Pre-Roman Period (Oksywie Culture) and Roman Period (Wielbark Culture) weaponry. Another example is a grave field in Chwarstno, Łobez District. Weapons were discovered there, but there is no exact data on these finds. It is said that there were pit graves with weapons at this site. Wołągiewiczowie believe that these were perhaps Roman Period features,[303] but they offered no arguments to support this chronology.

In summary of these considerations, it should be said that the Wielbark Culture arsenal was dominated by shafted weapons of forms that were characteristic of the Przeworsk Culture. A significant role was played by shields. Swords were also of considerable importance, although it is difficult to precisely assess their relevance. In the Early Roman Period these were both double- and single-edged weapons, which matched central European standards. As far as the shield parts are concerned, the only difference from the Przeworsk Culture may have consisted in the use of bronze shield grips (Łubiana). This

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[298] Gaerte 1926, 310–15; Cieśliński 2010, 232 pl. 22A:2.

[299] Cieśliński 2010, 98–99.

[300] von Carnap-Bornheim 2003, 242–44 fig. 2.

[301] Matešić 2015, 517–19 pl. 8.

[302] Voß 2008, 254, 256 fig. 4:1.

[303] Wołągiewiczowie 1964, 117.

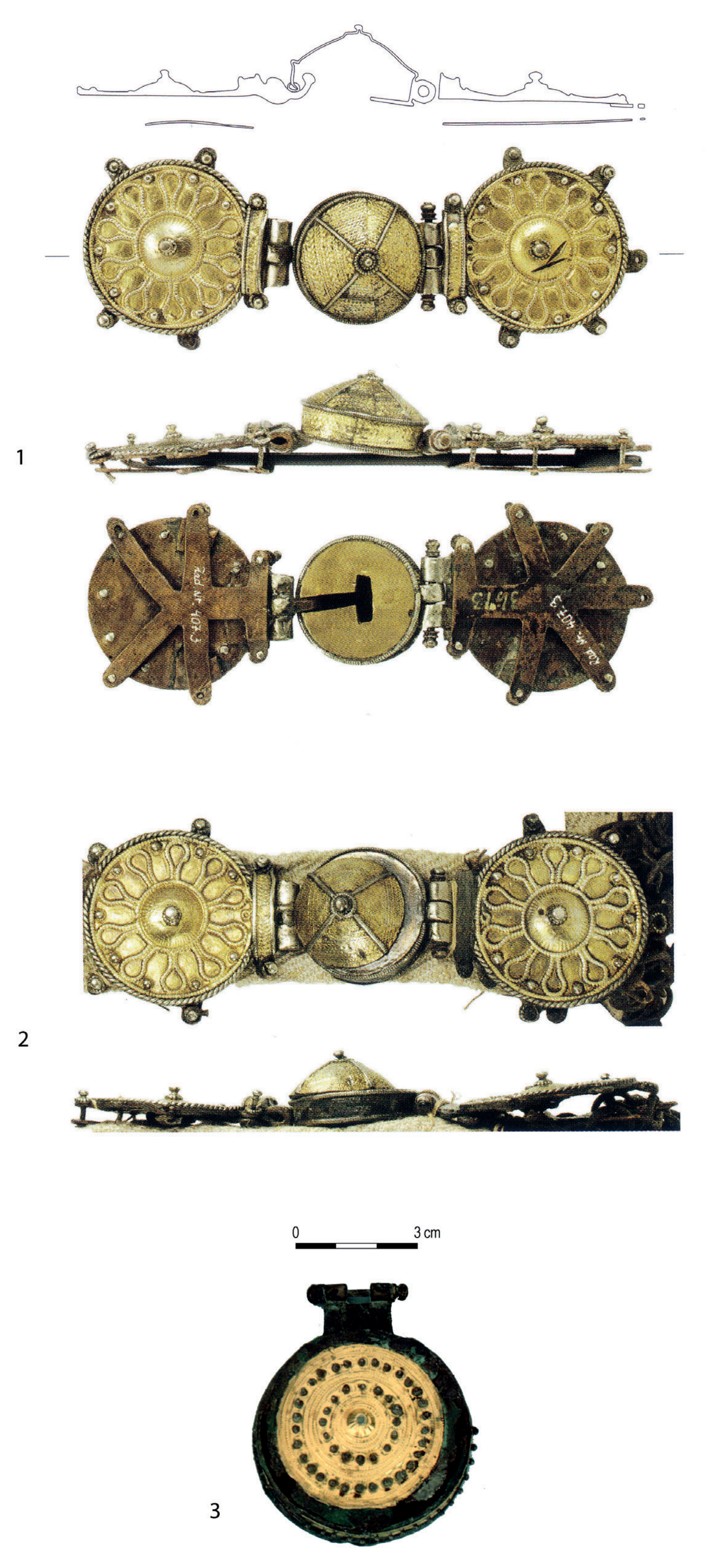

Figure 3.26. Fasteners of mail armour. 1–2 — Thorsberg, 3 — Dobrocin, Ostróda District (1–2 — after Matešić 2015, pl. 108:M1172, M1173; 3 — after Cieśliński 2010, pl. 22.A:2).

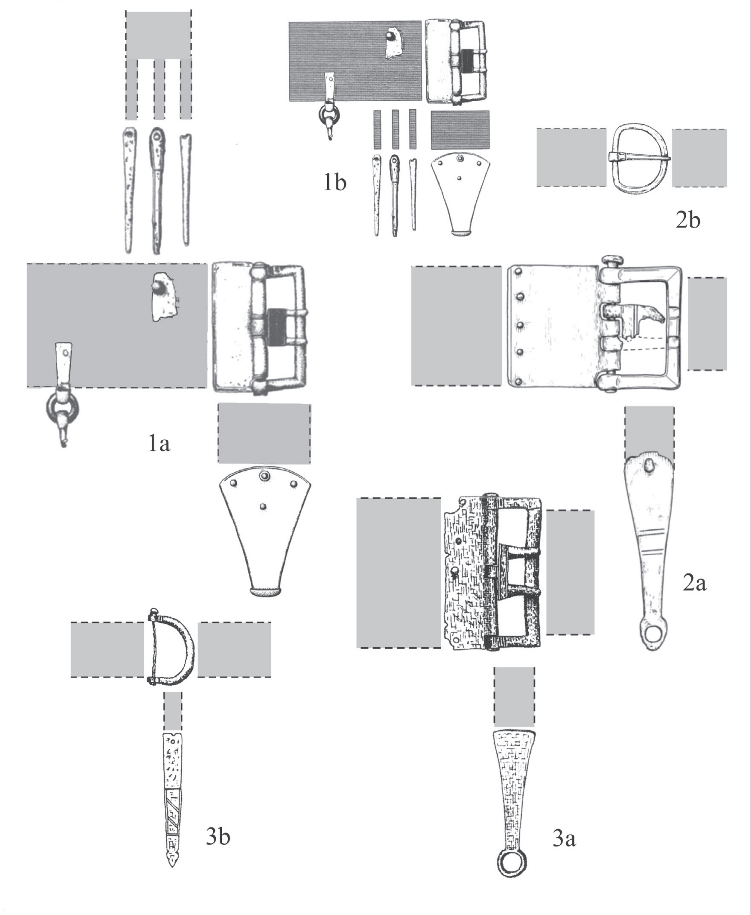

Figure 3.27. Reconstructions of male belts in the Wielbark Culture from Phases B2–C1a. 1 — Kowalewko, Oborniki District, Grave 369, 2 — Weklice, Elbląg District, Grave 139, 3 — Podwiesk, Chełmno District (after Madyda-Legutko 2015, fig. 3).

seems to imply the existence of some Scandinavian–Elbe Germanic links, which are also proven by discoveries of putative bone/antler shafted weapon heads and chair-shaped spurs. Apart from this, however, spurs from this period imitate Przeworsk Culture patterns. It seems that axes did not play a prominent role in this time, as there are no finds that could be dated with certainty to Phase B. It is possible to maintain an earlier supposition[304] that Wielbark Culture weaponry of this period was shaped in accordance with the Przeworsk Culture model. This is clearly suggested by the forms of shafted weapon heads. This image is accurate up to the beginning of the Younger Roman Period, as demonstrated by the finds from Drozdowo. A significant change took place in the Younger Roman Period, which was related to a partial adaptation of the Scandinavian weaponry model. This is testified to by the axe from Mielno, the sword pommel from Krosno, the fragment of a mail fastener from Dobrocin, and parts of sword shoulder belts from Kamienica Szlachecka and Linowo, but most importantly: by a distinctive cultural marker — shafted weapon heads (Borowo, Mława, the Skiolum type spearhead from Żarnowiec, the javelin head from Wyszomierz Wielki). The spurs from this period are evidence for the Przeworsk Culture influences weakening, however, with preservation of original forms that were not dominated by the Scandinavian model. A considerable role in this period may have been played by axes (probably borrowed from the West Balt Circle), which fits within the kindred Černâhov Culture weaponry model. In contrast to what has been hitherto assumed, bows and arrows did not play a military role in this period and were rather used as hunting weapons. Finds of arrowheads in the Wielbark Culture are much less numerous than was previously believed; many of these were erroneously linked with this unit, being in fact small bronze arrowheads of the Lusatian Culture, sometimes in secondary context. This image, where until the beginning of the Younger Roman Period the Wielbark Culture military equipment is dominated by the Przeworsk Culture model, followed by the dominance of the Scandinavian pattern (with Černâhov Culture elements), is not only demonstrated by weaponry. An analysis of men's belts in the Wielbark Culture leads to the same conclusions.[305] It turns out that metal fittings of said belts dated to the developed Phase B2 and Subphase C1a demonstrate similar stylistic traits as those worn by warriors from the neighbouring cultural areas, chiefly from the Przeworsk Culture milieu (Fig. 3.27). On the other hand, in later phases of the Roman Period there are metal parts of belts which are characteristic of the Scandinavian zone (Fig. 3.28).

The decline of the Wielbark Culture does not offer many opportunities to assess the nature of weaponry. It can only be supposed that in the Early Migration Period warriors were armed in a way that was similar to the East Germanic model, including its characteristic acceptance of some nomadic patterns. This is suggested by the sword from Juszkowo, the arrowhead from Cecele, possibly by the aforementioned finds from Hrebenne, as well as by provincial Roman artefacts (some spurs).

These conclusions are based upon selective and not fully representative data. What must be especially stressed is a disproportionate number of weaponry finds from the Early Roman Period compared with artefacts from later times. This was perhaps a result of an extant post-Oksywie Culture habit of depositing weapons into graves. Undoubtedly, the verification of the presented findings will be possible as the sources grow. Therefore, hope should be pinned primarily on new discoveries of sacrificial deposits in wetlands and waters. However, an awareness of these limitations does not mean that one should not propose new hypotheses, which will perhaps be verified by new discoveries. Let us, therefore, try to explain why these changes were taking place in such a manner. The dominance of the Przeworsk Culture weaponry model in the Early Roman Period was due to its attractiveness and the close neighbourhood of both units. The popularity of Przeworsk Culture weapon types (shafted weapon heads, shields, swords) can even be seen in the West Balt Circle (especially in the Bogaczewo Culture), which was distinct with regard to numerous traits,[306] and in other cultural units of the central European *Barbaricum*.[307] What may have worked in favour of this were perhaps common military enterprises organized by 'Vandal' chieftains, especially within the framework of multi-ethnic retinues.

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[304] Kontny 2006, 152.

[305] Madyda-Legutko 2015, 437–46.

An indication of this phenomenon is perhaps the case of the discovery of weaponry from the offering site at Vimose, where Przeworsk Culture (shafted weapon heads, single-edged swords) and Balt arms from Phase B2 were found. These were typically Balt weapons such as socketed axes or axes and shield bosses with short blunt spikes, including ones made entirely of wood. This assemblage also included carpenter tools, which are rare at sacrificial sites but very popular among grave goods in the Balt milieu. Assumed participation in raids aimed at distant areas sometimes demanded the use of boats, and such was the case with Vimose on the island of Funen where pieces of weapons characteristic of other areas were found. This seems reasonable, because of the fact that trade (at least sea trade) and warbands were strictly connected as they were made up of well-trained crews of oarsmen. Such a supposition is valid not only for the Roman and Migration Periods,[308] but it may be true for the times as early as the Bronze Age, which may be concluded from the representations of warriors and boats in Nordic rock art.[309] What is more, as late as the Viking Period warbands were organized into boat guilds.[310] It probably was not a task for Przeworsk Culture people living far from the sea, and even not for the Balts, especially the ones living in the lakelands. The Wielbark Culture, however, with its partly littoral position, seems quite a good area for preparing such expeditions. As their weapons were similar to those of the Przeworsk Culture, they may not be traced easily among the Vimose finds; however, one may assume their participation in events. Theoretically, one cannot exclude even the Elbe Germanic Circle, although it seems less probable in this case. All in all, this seems to prove that multi-ethnic military forces existed and were defeated somewhere on Funen.

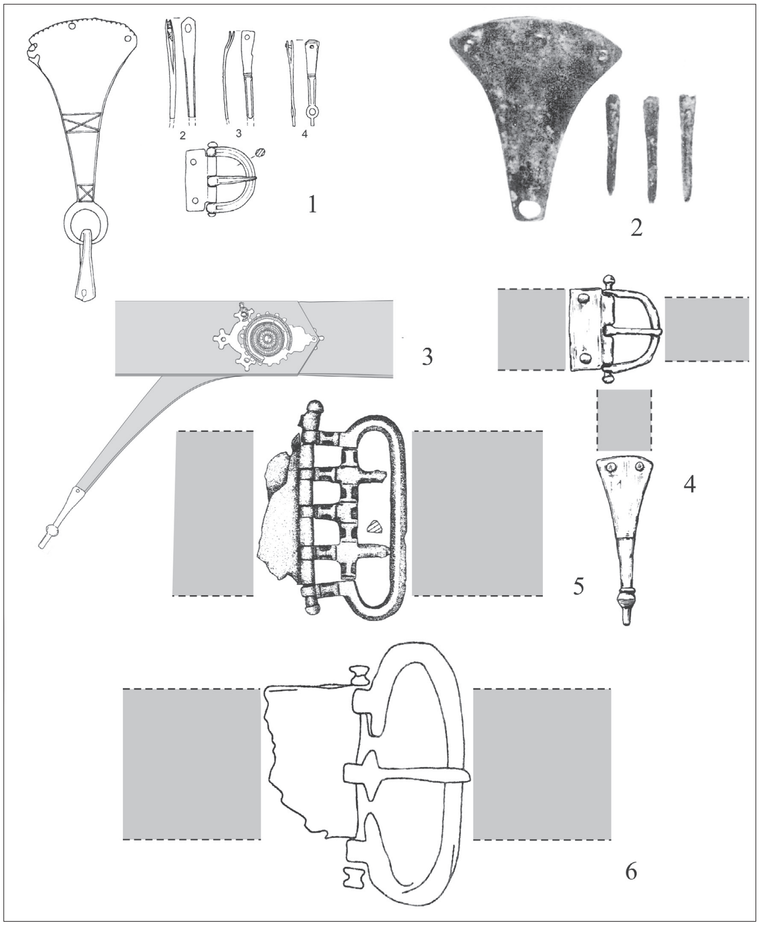

Figure 3.28. Reconstructions of male belts in the Wielbark Culture from Phases C1b–C2. 1 — Pruszcz Gdański, Gdańsk District, Site 10, Grave 205, 2 — Połowite, Ostróda District, Grave 24, 3 — Kamienica Szlachecka, Grave 5, 4 — Weklice, Grave 82, 5 — Ulkowy, Grave 109, 6 — Malbork-Wielbark, Grave 455b (after Madyda-Legutko 2015, fig. 4).

A breakthrough in the Wielbark Culture weaponry model that occurred at the beginning of the Younger Roman Period (Fig. 3.29) cannot be explained without taking into consideration a change in the extent of the Przeworsk and Wielbark Cultures which took place in Phase B2/C1. It is perhaps related to the population translocation ('migration of the Goths'), in which some small groups of Balt and Przeworsk Culture warriors may have participated. In this case, it was rather 'Goth' chieftains who were military leaders. The Crimean necropolis of Čatyr-Dag is perhaps a manifestation

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[306] See Chapter 4.

[307] Kontny 2019d.

[308] Kontny 2012, 69–71; 2023a, 122–23.

[309] Ling and others 2018, 150–52, 160–61. Here, parallels from southern California (the Chumash Indians) and the north-west coast of America (the Haida), where sodalities/boat guilds organizing trading and raiding expeditions were developed, should also be mentioned.

[310] Jakobsson 1992, 81; after Ling and others 2018, 160.

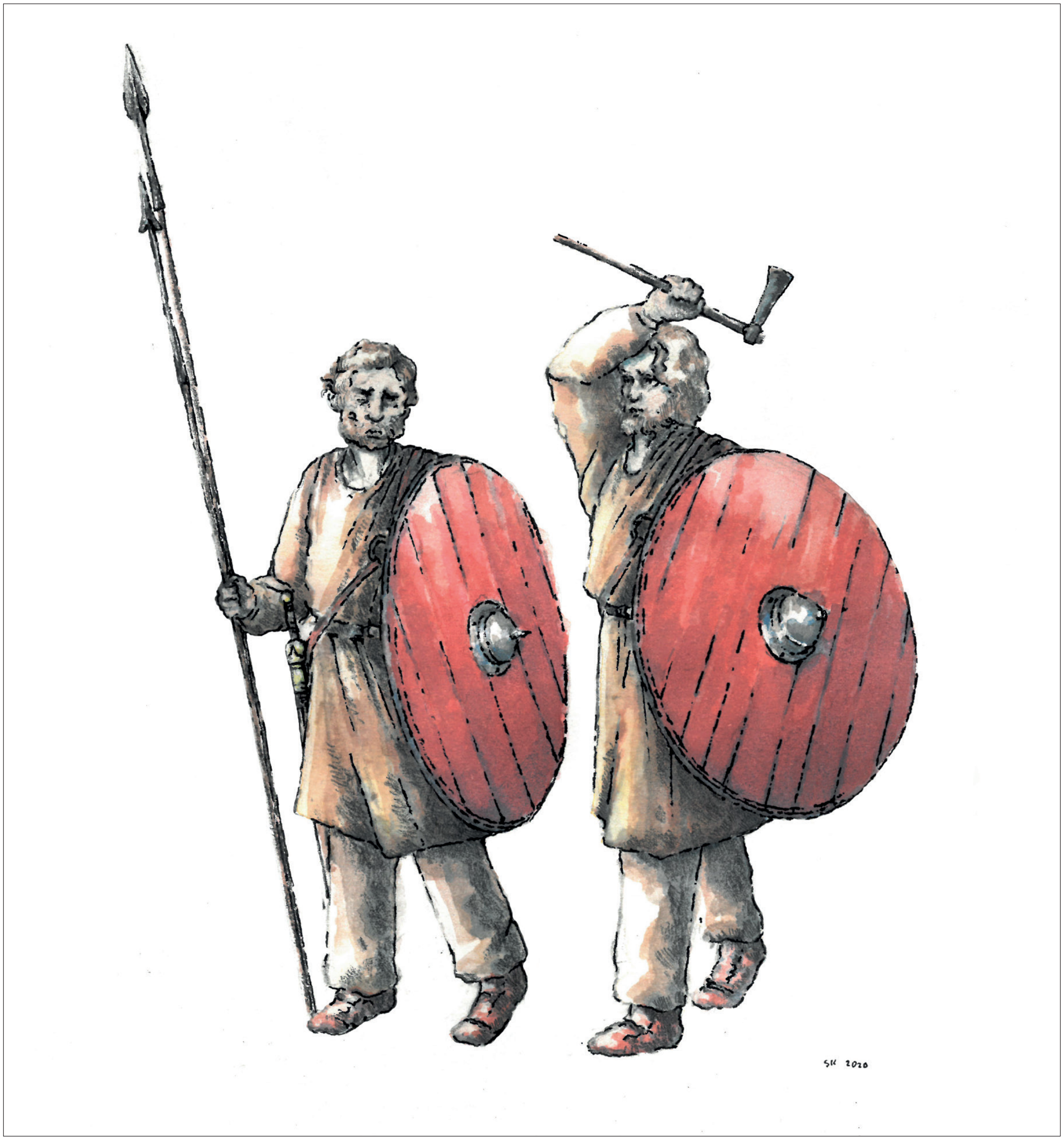

Figure 3.29. Reconstruction of the Younger Roman Period Wielbark Culture warriors (concept Bartosz Kontny, drawing Stanisław Kontny).

of this process. Since the mid-third century the dead were buried at this site with weaponry that suggests a peculiar 'cultural blending'. The weapons included Sarmatian, Przeworsk Culture, Balt, and Scandinavian artefacts.[311] A consequence of the Černâhov Culture and the Sântana de Mureş Culture formation was the rise of a contact zone between the Baltic Sea and the Black Sea. One must refer here to an idea of Joachim Werner, who proposed the concept of the Dančeny-Brangstrup horizon, which was an archaeological manifestation of links between Scandinavian and 'Goth' (Černâhov Culture) elites. According to this idea, strong influences from the north-west to the south-east (the spread of, i.e. rosette fibulae, iron combs, amulets, glass beakers, etc., was perceived as a piece of evidence of this), were characteristic of Phase C2, while Phase C3 was dominated by the same contacts, but in

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[311] Kontny 2013b, 196–212.

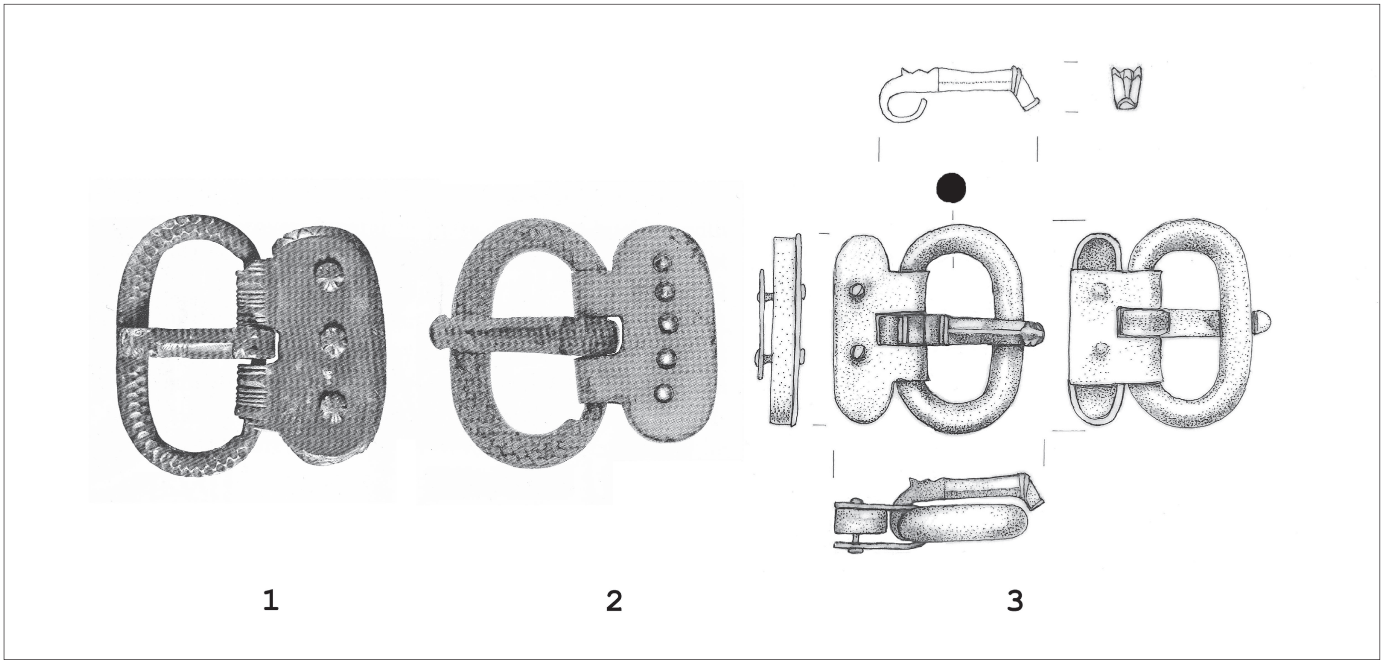

Figure 3.30. Examples of buckles ornamented with a zoomorphic motif on the spike: 1 — Varpelev, Zealand, Grave 'a', 2 — vicinity of the locality of Ružyn, Žytomir District, 3 — Pruszcz Gdański, Site 7, Grave 250A (after Kontny and others 2015, fig. 4).

the opposite direction.[312] Issues of cultural contacts in the zone in question have recently been dealt with in a more comprehensive manner,[313] and in this discussion the chronological framework was broadened and lateral branches of this cultural 'transmission belt' were noticed. What is of significance is the fact that not only patterns concerning cimelia and luxury artefacts, but also — to some degree — male dress and weaponry were transmitted in this way.[314] This is manifested, among other things, by warrior belt parts having also been found in the territory of the Wielbark Culture (Pruszcz Gdański, Site 5). These have analogies both in the Scandinavian world and in the Pontic zone (Fig. 3.30), and were to some extent inspired by Roman patterns.[315] This obviously supported the eclecticism of Wielbark Culture weaponry, which drew on both Černâhov Culture and Scandinavian patterns. This took place in spite of the fact that the contact zone, that is the Wielbark Culture part of the Baltic coast, was smaller than in the Early Roman Period. On the other hand, the possible adaptation of East Germanic weaponry at the beginning of the Migration Period is explained by entering the sphere of Hunnic rule, caused by the fall of the Ostrogoth state of Hermanaric as a result of the Hun invasion in 375, and by peoples' migrations that were initiated as a result. During this time, Germanic and nomadic peoples were fighting together in various coalitions, both against and on the side of Byzantium or the Western Empire. This resulted in the adaptation of some Roman patterns and a quick exchange (similarly to earlier multi-ethnic retinues but on a much larger scale) of information concerning military matters. On the other hand, sets that include — using Gothic terminology, taken from Wulfila's translation of the Bible — such weapons (*sarwa*) as *brunjo* (mail armour), *skildus* (shield), *hilms* (helmet), *meki* (*spatha* sword), and *hairus* (sax),[316] are beyond the chronological scope of this chapter.

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[312] Werner 1988.

[313] Khrapunov and Stylegar 2011; see in particular Kazanski 2011; Magomedov 2011.

[314] Kazanski 2011; Stylegar 2011.

[315] Kontny and others 2015.

[316] Cf. Wolfram 2003, 123.

CHAPTER 4

Balt Weaponry from the Roman and Migration Periods in the Territory of Poland

State and Nature of Research

The weaponry of the Balt peoples, who inhabited current north-eastern Poland and adjacent territories of present-day Lithuania, Latvia, and the Kaliningrad Region was for many years not the subject of detailed studies. This resulted from a specific state of research in this area: before the Second World War, examinations carried out here were managed by archaeologists associated with the Königsberg scientific centre. They were very active during the nineteenth century but it was only in exceptional cases — Otto Tischler must be mentioned here — that their research was on a very high methodical and scholarly level.[1] Archaeologists from Königsberg, who were especially active in the Physical-Economic Society (Physikalisch-Ökonomische Gesellschaft), and then in the 'Prussia' Society of Antiquities (Altertumsgesellschaft Prussia), excavated numerous necropoleis. However, dissemination of research results left much to be desired. Very few cemeteries were comprehensively published and a majority are known only from mentions or reports. At the best of times, these contained images of selected finds, or analogies to artefacts (as shown by later studies, both were not always accurate). Finds and excavation reports were usually handed over to various Königsberg collections that were eventually merged into the Prussia-Museum collection, which fell prey to devastation in the course of World War II.[2]

Only part of these materials (albeit a significant one), that since 1949 has been stored in the cellars of the Institute of Prehistory of the German Academy of Sciences at Leipziger Strasse 3–4 in Berlin, was made available to the public in 1990. At present, the collection is part of the Museum für Vor- und Frühgeschichte in Berlin, while the archive became part of the Archive of the Prussian Cultural Heritage Foundation (Preußischer Kulturbesitz).[3] What is more, in 1999 a considerable part of the Königsberg collection (so-called *Schausammlung*) was discovered in Fort Quednau (so-called Fort III) near Kaliningrad. On this occasion, it was found that a significant part of the assemblage had been looted. These materials were first made more broadly available to researchers at the turn of the millennium and — in the case of the Kaliningrad collection — not in a comprehensive manner. It is probable that a considerable part of the Prussia-Museum collection will never be found, although surprising discoveries are still possible. This is demonstrated by a recent discovery in Kaliningrad in the ruins of the 'Under

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[1] A common way of searching for archaeological features at necropoleis was a metal pin/probe. Spots where the instrument met resistance were excavated. However, in such cases features whose structure was not compact enough (e.g. pit graves) were simply omitted. What is more, this method did not guarantee that all urns would be revealed, as large surfaces were not uncovered in most cases. Instead, only the closest neighbourhood of identified features was examined.

[2] History of archaeological research in East Prussia and the fate of the Königsberg collections have often been discussed in detail, see e.g. Bitner-Wróblewska and others 2008, 13–25; Bitner-Wróblewska 2008b, 46–67; Hoffmann 2018. Therefore, I only make the most necessary remarks with regard to this issue.

[3] With reference to the most significant parts of this archive from the point of view of arms and armour studies one must mention the Prussia-Fundarchiv (it contains, among other things, excavation reports, sketches, and correspondence concerning individual sites), as well as the Fotoarchiv (i.e. photos of finds from the collection of the Prussia-Museum, including weaponry).

Three Crowns' (German *zu den drei Kronen*) Masonic lodge.[4] What is more, finds from private collections began to come to light.[5] A minute portion of the Königsberg collection, evacuated in 1943 to Karolewo near Kętrzyn (former Carlshof, Kr. Rastenburg) was found after the war in the collection of the Museum of Warmia and Masuria in Olsztyn. What survived in Kaliningrad were the so-called 'inventory books' of the Prussia-Museum.[6] These were badly damaged and restored by Polish conservators. These particular documents were produced in the course of a repeated registration of finds that was carried out in the 1930s.

The list of the aforementioned archives must be completed with private folders of pre-war archaeologists who were interested in Balt territories.[7] These sources were recognized by researchers in the late 1980s, although earlier pioneering attempts at using this data must be mentioned.[8] In this work, pieces of information from Martin Jahn's archive, which is stored in the collection of the Faculty of Archaeology of the University of Warsaw, were used in abundance.[9] Jahn was not particularly interested in Balt issues. However, as author of an extremely reliable study on weaponry,[10] he was meticulously gathering data on e.g. weapons of Balt peoples. Due to this, Jahn's archive is a highly valuable source. Although the illustrations it contains are usually rather schematic, the author of these drawings paid attention to relevant technological and ornamentation details. Furthermore, the most important dimensions of artefacts were offered with accuracy to 0.5 cm.

Documents which are of considerable importance for weaponry studies can also be found in Herbert Jankuhn's files, stored in the Archäologisches Landesmuseum Schloss Gottorf in Schleswig; a part concerning Masuria was published.[11] For many years, Jankuhn specialized in Balt issues (e.g. in his doctoral dissertation)[12] and very carefully recorded entire grave assemblages, including weapons. The legacy of Rudolf Grenz, held by the same institution, is of supplementary significance. Records that can be found there do not in the main contain original information; however, while having copied data from available publications and archive materials (especially from Jankuhn's files), Grenz established a database which filled gaps in records of previous research. It is also important that he copied data in an extremely careful manner (often using a typewriter) which facilitates reading. Handwritten in neo-Gothic script, records of pre-war archaeologists are sometimes so sloppy that even present-day German researchers and archivists are unable to read them.

The value of Marta Schmiedehelm's archive is lower from the point of view of this work. Her files survived in the archive of Tallinna Ülikooli Arheoloogia Teaduskogu (Tallinn University Archaeological Research Collection) in Tallinn. This collection of records is a result of several queries, in the course of which this researcher meticulously copied pieces of information from excavation reports. This source contains a lot of valuable data on grave assemblages.[13] Regrettably, Schmiedehelm was not particularly interested in weaponry, and it was only sporadically that she prepared drawings of arms. What is more, these sketches are in most cases very schematic and have no greater cognitive value. This especially applies to so-called secondary cards, containing pieces of information which Schmiedehelm took from her own archive and which she considered relevant. An exception is offered by a series of good-quality drawings which depict Balt shafted weapon heads with barbs; the aforementioned documentation was perhaps a gift from Carl Engel. Copies of these drawings can also be found in Grenz's files.

Pieces of information gathered in Kurt Voigtmann's files, now kept in the Museum für Vor- und Frühgeschichte in Berlin, also proved invaluable.[14] These folders were created in the 1930s for the needs of a dissertation concerning the Migration Period in Masuria. They also contain sketches, and in many cases even careful drawings and detailed data with regard to finds from the earlier period, also including weaponry.

The research interests of Felix Jakobson also focused on the Migration Period. His archive is stored in the Latvijas Nācionalais Vēstures Muzejs (National History Museum of Latvia) in Riga, and — apart from data on the Migration Period — it also contains information concerning finds from the Roman Period, including weaponry. The quality of the drawings is satisfactory and this source was published.[15]

A considerable part of data in Nils Åberg's files from the Riksantikvarieämbetet (Swedish National Heritage Board) in Stockholm involves the Migration Period in Masuria. However, these files contain very

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[4] Hohlov 2013, 259–60.
[5] e.g. the so-called Biriukov Collection, see Rudnicki and others 2015, 286–87.
[6] Bitner-Wróblewska 2008a.
[7] Juga-Szymańska 2007.
[8] Okulicz 1958.
[9] See Szter 2011.
[10] Jahn 1916.
[11] Nowakowski 2013.
[12] Cf. Jankuhn 1933. On H. Jankuhn see Mahsarski 2011.
[13] Juga and Szymański 2003.
[14] Junker and others 2009, 376, 379.
[15] Jakobson 2009; Nowakiewicz 2011.

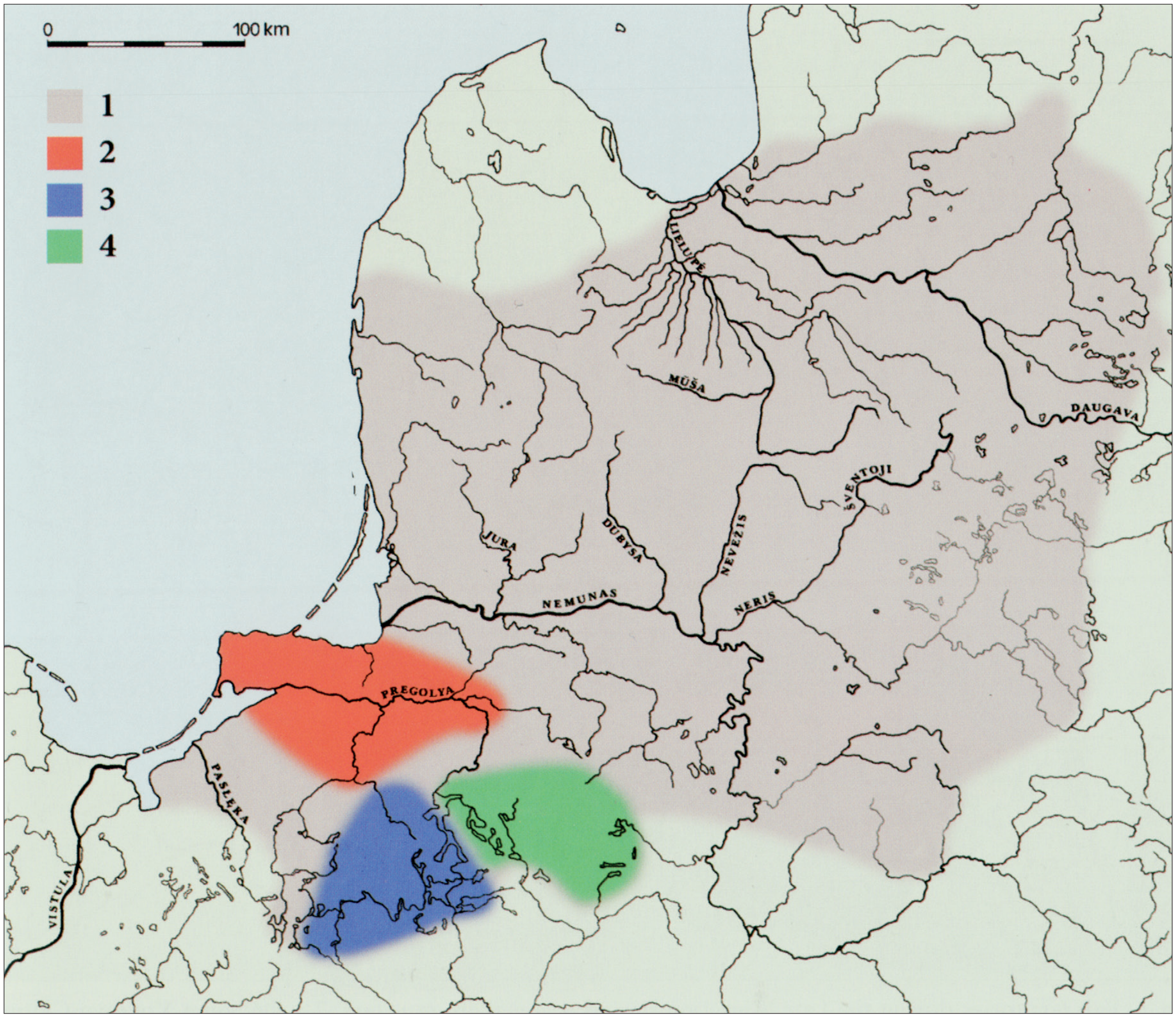

Figure 4.1. West Balt milieu in the Younger Roman Period. 1 — maximum extent, 2 — Dollkeim-Kovrovo Culture, 3 — Bogaczewo Culture, 4 — Sudovian Culture (after Bitner-Wróblewska 2010, fig. 1).

little data on weaponry, which is why they are only of secondary importance to this work.[16]

The same can be said about part of Otto Tischler's archive in the collection of the Museum of Warmia and Masuria in Olsztyn. It contains data on grave inventories from the discussed territory, but with no closer details on weaponry forms. However, it sometimes offers an opportunity to complete our knowledge concerning inventories of individual graves.[17]

Włodzimierz Antoniewicz's folders, stored in the Faculty of Archaeology of the University of Warsaw, contain an abundance of data on Balt weaponry in the Migration Period. However, as these finds were discovered in the territory of present-day Lithuania and Belarus, Antoniewicz's archive is of auxiliary significance in this case.[18]

Due to a vestigial state of preservation and limited accessibility of the source database, more in-depth studies on Balt weaponry became possible only after the lost materials had been revealed and archives had been made available. Until the end of the twentieth century it is possible to point out only individual works: attempts at reconstruction of shields[19] and horse tack,[20] valuable remarks on axes,[21] as well as a discussion on Migration Period saxes (Elbląg Group).[22] With regard to post-war works, there was a brief study on weaponry from the territory of present-day Lithuania[23] and a paper by Wojciech Nowakowski, in which he paid attention to a small number of swords in the West Balt zone.[24] At the beginning of the next century a work on arrowheads from the territory of Lithuania[25] and a science communication paper on Balt weaponry were published.[26] Apart from that, one can mention a list of the earliest weaponry finds of the Bogaczewo Culture (which at present does not broaden our knowledge on this issue very much).[27] This list soon underwent critical verification.[28] This work and later ones already make broad use of the aforementioned discovered sources. It is thus necessary to mention work on shafted weapon heads in the Bogaczewo and Sudovian Cultures,[29] new discussions on swords[30] — including saxes[31] — as well as papers which form a comprehensive analysis of Balt blunt weapons from the Polish lands.[32] One should also mention work on spurs,[33] although its quality is completely unsatisfactory, particularly due to insufficient source query. Furthermore, there was a general summary of the horsemen's graves issue.[34] Apart from that, there are works concerning shields — a pretty good one, discussing Lithuanian finds,[35] and a much poorer paper on Sambian-Natangian discoveries from the Dollkeim-Kovrovo Culture.[36] Finally, one must mention a classification of Lithuanian socketed axes.[37]

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[16] Kontny 2014b.

[17] See Bitner-Wróblewska 1996.

[18] I am especially indebted to the following persons for access to archival sources and museum collections: Dr Horst Junker, Dr Horst Wieder, and Dr Heino Neumayer from the Museum für Vor- und Frühgeschichte in Berlin, Prof. Claus von Carnap-Bornheim from the Archäologisches Landesmuseum Schloß Gottorf in Schleswig, Dr Anna Juga-Szymańska from the Faculty of Archaeology University of Warsaw, Dr habil. Anna Bitner-Wróblewska from the State Archaeological Museum in Warsaw, Dr habil. Mirosław Hoffmann and Dr Jarosław Sobieraj from the Museum of Warmia and Masuria in Olsztyn, Halina Karwowska from the Podlachian Museum in Białystok, Jerzy Brzozowski from the District Museum in Suwałki, and Dr habil. Maciej Karczewski from the University of Białystok.

This chapter is an attempt at a comprehensive discussion of the issue of Balt weaponry known from the Polish lands dated to the Roman and Migration Periods, viz. attributed to the Bogaczewo Culture and Sudovian Culture (Fig. 4.1), as well as the Elbląg and Olsztyn Groups. A few sites of the Dollkeim-Kovrovo Culture[38] and the so-called Bartia Group[39] require a study that would also take weaponry from the Sambian-Natangian territories into consideration, which is beyond the scope of this work. Weaponry finds in the studied territory are chiefly known from furnishings of graves, including destroyed ones (stray finds in burial grounds), but one must also mention watery offering sites, both known from archive sources (Wólka, Kętrzyn District — former Wolka-See, Kr. Rastenburg),[40] as well as the most recent discoveries, which regrettably have not been processed yet (Czaszkowo, Mrągowo District)[41] or their studies are in the very initial stage (Lake Śniardwy nearby Zdory, Pisz District).[42]

The Origins

Not much can be said about the model of weaponry in the West Balt Barrow Culture, directly preceding the Roman Period cultural units in the West Balt Circle. In the almost complete absence of sources (cremation burials with weapons only exceptionally placed in graves; weapon finds come mostly from the lake settlements) one can abundantly use parallels from the Lusatian and Pomeranian Cultures, but also from northern Europe. The obtained image (Fig. 4.2)[43] shows unspecialized warriors, which is manifested by the lack of evidence that metal protective equipment was used (shields, helmets, armour, greaves), and also by a very small number of swords and decorative elements of horse harness. Theoretically, the lack of elite formations does not exclude a possibility of a military 'career' in distant regions, but — if present at all — this phenomenon was marginal (perhaps unique swords got here this way). Men were probably occasional warriors, and being part of this 'after-hours professional group' was not reflected in the funeral rites. Their weapons could have been used both in combat and hunting (wooden clubs[44] and spears with metal but also bone and antler points, possibly bows and arrows) or on a farm (socketed axes, knobbed shaft-hole axes, perhaps also stone or antler hatchets). One may add organic shields, probably with wooden bosses.

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[19] La Baume 1941a.
[20] La Baume 1944.
[21] Nowakowski 1995, 36–38. These remarks were also repeated in another publication: Nowakowski 2007a.
[22] Ehrlich 1931.
[23] Kazakevičius 1988. One can also refer to an article devoted to arms in particular cultural groups of the Balt Circle (Michelbertas and Vitkūnas 2003), which, however, presents only very general observations.
[24] Nowakowski 1994a.
[25] Kazakevičius 2004.
[26] Nowakowski 2006.
[27] Nowakowski 2002.
[28] Kontny 2007a.
[29] Kontny 2007b. Cf. also a rather concise discussion on shafted weapon heads with barbs: Nowakowski 2014.
[30] Nowakowski 2007b; Kontny 2017c.
[31] Kontny 2013c, with further reading.
[32] Kontny 2016c; 2018a. See also a comment on Tacitus's narrative concerning Aestian *fustes* (battle clubs), Kontny 2015b.
[33] Smółka 2014, 60–61.
[34] Nowakowski 2009.
[35] Kiulkys 2010.
[36] Radůš and Skvorcov 2008, 122–45. What makes this paper highly unsatisfactory are omissions concerning the verification of shield fitting chronology and — regrettably — numerous factual mistakes.
[37] Malonaitis 2008.
[38] e.g. Cieśliński and Nowakowski 2006.
[39] See Kontny and Szymański 2015, 339–40, with further reading.
[40] Raddatz 1993; Kontny 2015a.
[41] Nowakiewicz and Rzeszotarska-Nowakiewicz 2012.
[42] Grzędzielska and Kontny forthcoming.
[43] Kontny 2021d.

This does not mean, however, that those were peaceful communities, as can be seen from lake grid settlements — inhabited all year long — and land settlements, both of a presumably defensive type. Their significant number might indicate the existence of a permanent threat, and — due to the fact that the art of siege had not yet been developed here — these fortifications were sufficiently effective if the appropriate number of defenders and supplies were gathered. It could be assumed that the source of the threat was not necessarily invaders from distant lands. It was rather internal conflicts between groups forming settlement clusters that were dominating, as shown by analogies taken from cultural anthropology. It seems possible that such communities should be classified as Type B societies, according to Keith F. Otterbein.[45] They were characterized by an insignificant role of warriors' brotherhoods; the military organization was in the form of local militias held together by belonging to a settlement rather than a family. In such structures, all men capable of carrying weapons were obliged to defend the village and, if retaliation was necessary (this could be decided by the council or the head of the settlement), it would have been expected that primarily young people competent in combat would participate in such endeavours. However, the lack of professional military structures did not exclude martial activity: raids, ambushes, attacks just before dawn, and rarely clashes without sophisticated tactics, saving women and children, sometimes taking slaves to be sold in more centralized political systems — these are the basic features of the military organization of such societies. Which of these could have been encountered in the West Balt Barrow Culture still remains unclear, but the overall traits seem to be congruent with archaeological data.

The Roman Period

Roman Period weapons were found in the following cultures: the Bogaczewo Culture in the Masurian Lakeland and in the vicinity of Augustów,[46] and in the Sudovian Culture (Suwałki region, the Gołdapa River Basin, and the region of Augustów).[47] In the case of the Bogaczewo Culture, the earliest finds can be related to the end of the Late Pre-Roman Period, i.e. to the earliest horizon of this culture.[48] The latest artefacts can be linked with Subphase C1b when changes in burial rites resulted in the abandonment of the custom of providing the dead with weapons. This may have taken place under the influence of the Wielbark Culture.[49] The Sudovian Culture came into existence at the beginning of the Younger Roman Period and lasted until the Late Migration Period.[50] However — according to the present-day state of knowledge — people associated with this culture placed weapons in graves only until

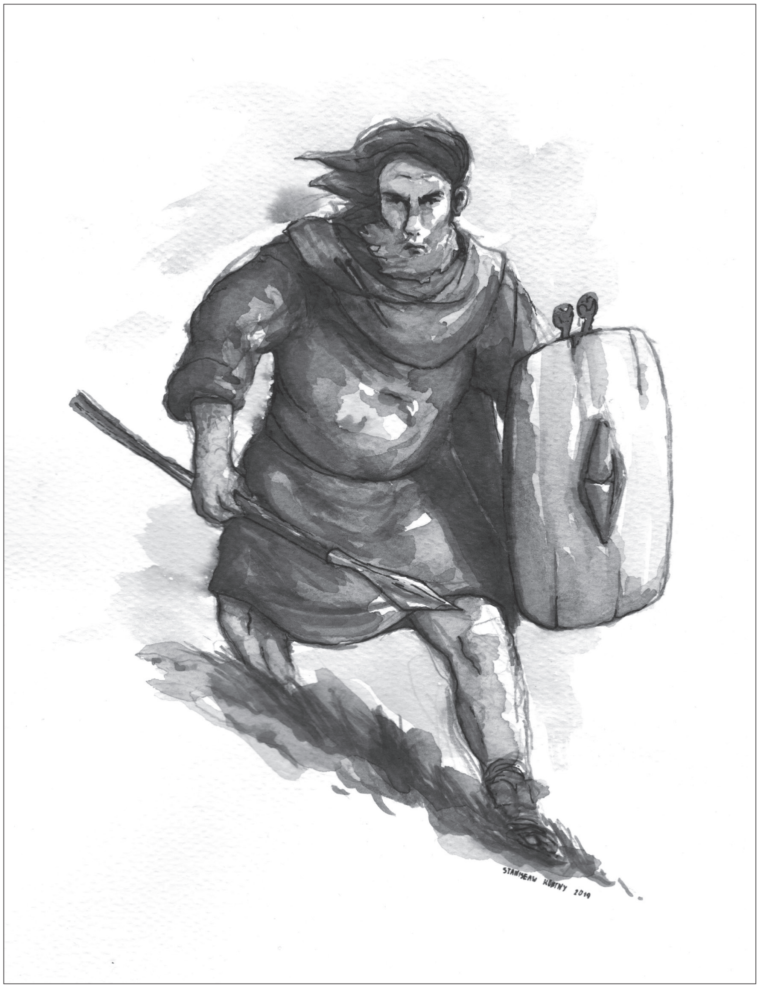

Figure 4.2. Reconstruction of the West Balt Barrows Culture warrior (drawn by Stanisław Kontny, according to the concept of Bartosz Kontny).

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[44] Kontny 2015b.
[45] Otterbein 2009, 26–28 fig. 3:1.
[46] Nowakowski 2007c, 136–37, 143, 148–49.
[47] Szymański 2013, 11–12 fig. 1.
[48] Kontny 2007a, 73–111; 2014a.
[49] Kontny 2008d, 100–01.
[50] Szymański 2013, 59–60 fig. 36; Nowakowski 2017, 16–22.

the beginning of the Migration Period. Therefore, our discussion on weaponry concerns these chronological frameworks.[51]

Polearms

These were the most widespread offensive weapons used by the Balts. Most finds could have been used in two ways, depending on requirements, namely as javelins (thrown weapons) or spears (in close combat), in a similar way to Przeworsk Culture artefacts.[52] In most cases, there was only one shafted weapon head per grave, which underlines the great significance of such dual-purpose weapons. This applies in particular to the Sudovian Culture, from which only three discoveries of shafted weapon head pairs are known,[53] out of all fifty-eight graves with shafted weapons (5.2 per cent). On the other hand, such cases are much more numerous in the Bogaczewo Culture (forty-three out of 267 instances, i.e. 16.1 per cent). A certain degree of weaponry specialization in the latter culture is evidenced by finds of shafted weapon heads with barbs,[54] although these are not very numerous. The presence of barbs excludes an opportunity for multiple uses of the weapon in close combat, as it would have been difficult to remove it from the wound or the adversary's shield. Thus, it would have made sense to use such weapons as javelins in the initial stage of combat.

Concerning said pairs of shafted weapon heads, it must be noted that their dimensions are sometimes very different. This implies that larger artefacts were spear parts, while smaller ones were elements of lighter javelins. Such examples, however, are exceptional,[55] and in most cases shafted weapon head pairs were of very similar dimensions (Table 4.1). This may suggest that dual-purpose weapons were used. In the light of available data, it seems that such an opinion is correct for all chronological stages of the Bogaczewo Culture. A clear difference from the Przeworsk Culture can be seen here, as in the latter it is possible to point out a period of specialization of shafted weapons (Subphase B2b), which was manifested by clear differences in sizes of shafted weapons heads. What seems to suggest Przeworsk Culture influences is the disappearance of shafted weapon heads with barbs from grave inventories, which occurs at the same time as in the territory of the Przeworsk Culture.[56]

Cremation, a practice dominant in the Bogaczewo Culture which was also in use in the Sudovian Culture, does not allow for a reconstruction of the shafted weapons' length. Discoveries from Sudovian Culture inhumation graves do not yield much data on this issue, either. Shafted weapon heads were often found in disturbed parts of graves. There was also a case of deposition of such artefacts perpendicular to the axis of the skeleton, which implies that the shaft was intentionally broken (Szwajcaria, Suwałki District, Barrow 2, Grave 1).[57] This was probably related to funeral rites, and a ritual killing of the deceased warrior's weapon may have been the goal (Figs 4.3:4, 4.11:6). It is not always clear whether a shafted weapon heads' deviation from the axis of the skeleton and the grave pit was intentional or was a result of the grave structure being disturbed. Therefore, it is possible to draw reliable conclusions if the shafted weapon head was found near the side of the deceased (usually on the right, above the shoulder), parallel to the deceased resting in situ in supine position, and if the skeleton was preserved relatively well, with leg bones near the limit of the grave pit. If feet are at a considerable distance from the grave's edge, it can be carefully assumed (this, regrettably, cannot be verified now) that the lower part of the shaft was deposited on the level of the feet. Thus, in the case of the shafted weapon from the grave in Barrow XV in Szwajcaria the shafted weapon's length may have been about 195 cm,[58] from Barrow XXIV — 180 cm,[59] and the same applies to the find from Barrow LXII.[60] Concerning Barrow LV, it may have been about 190 cm,[61] for Grave 2 in Barrow LXIV — 230 cm,[62] the flat Grave S.12–170 cm,[63] and the flat Grave S.27–210 cm.[64]

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[51] In this work I omit sparse finds of the Dollkeim-Kovrovo Culture from the Polish lands, as a discussion on these artefacts must be offered together with a depiction of all the weapons of this culture.

[52] Cf. Chapter 2.

[53] Osowa, Suwałki District, Barrow 114, Grave 2 — Jaskanis 1962, 274–75 pl. VII:3–10 (collection of the Podlachian Museum in Białystok, inv. no. MB/A/128, cat. no. 542); Szurpiły, Suwałki District, Barrow XXII — Żurowski 1961, 71–73 pls XVIII, XIX:1–22; Szwajcaria, Barrow 2, Grave 1 — Jaskanis 2013, 76–80, pls CXVII–CXXV; Kontny 2013a, 132–43 (collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/4498).

[54] Nowakowski 2014, 195–204.

[55] Machary, Grave 188; Spychówko, Grave 197 (research: A. Bezzenberger, 1902); Stręgiel II, Grave 128; Osowa, Barrow 114, Grave 2; Szurpiły, Grave XXII.

[56] Table 4.1, cf. Kaczanowski 1995, table XXI.

[57] Jaskanis 2013, pl. CXVIII; 1974, 165.

[58] Jaskanis 2013, pl. XXI.

[59] Jaskanis 2013, pl. XXXVI.

[60] Jaskanis 2013, pl. LXIII.

[61] Jaskanis 2013, pl. LIX.

[62] Jaskanis 2013, pl. LXV; in this case, the shafted weapon head was above the left shoulder, which may imply that the warrior was left-handed. Sometimes shafted weapons were also deposited in a reverse direction, cf. Szwajcaria, Barrow 58/1965, Grave 1: Jaskanis 2013, pl. CCIX.

[63] Jaskanis 2013, pl. CIII.

[64] Jaskanis 2013, pl. CX.

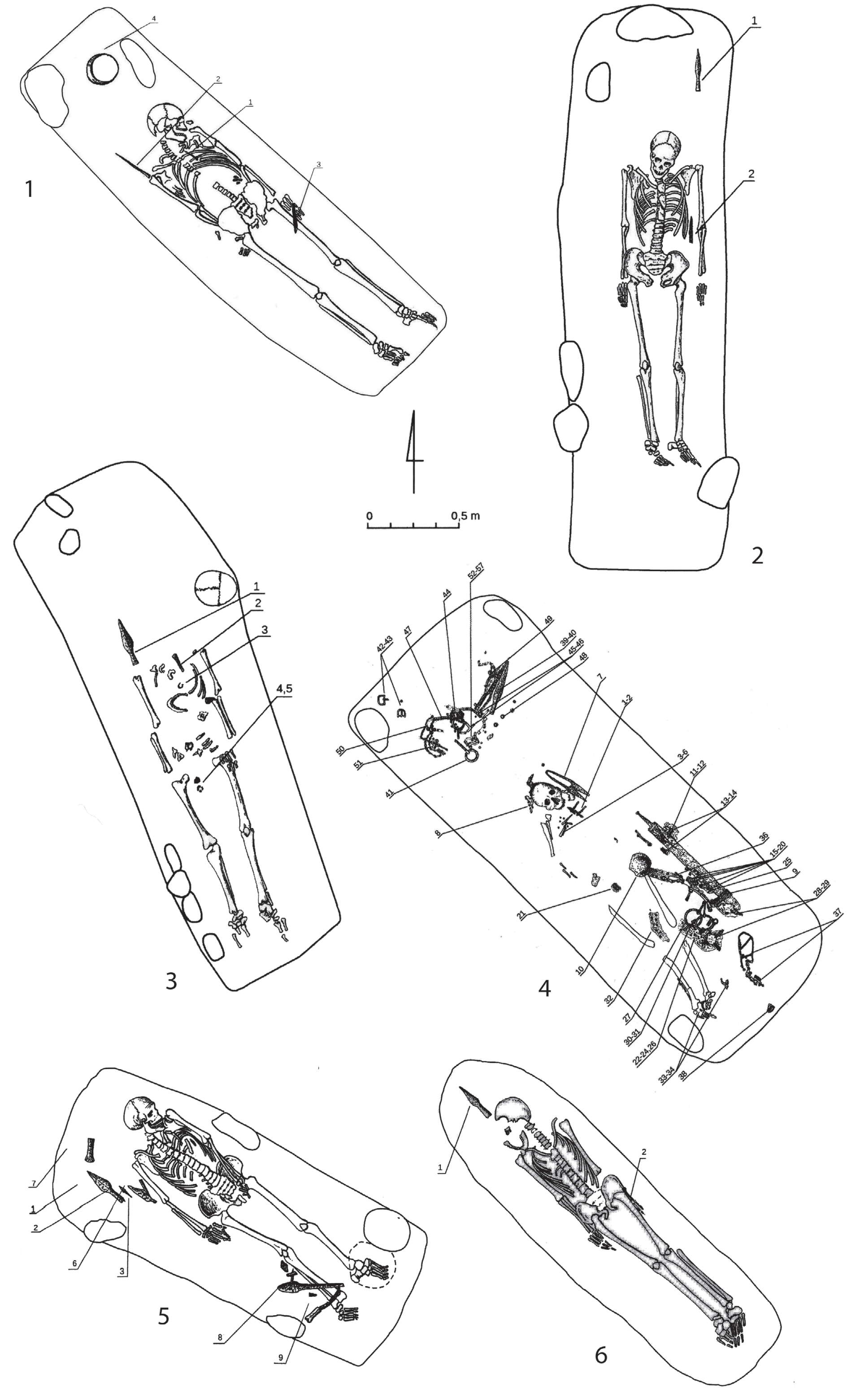
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Figure 4.3. Plans of inhumation graves with shafted weapons in the Sudovian Culture burial ground in Szwajcaria. 1 – Barrow XV, Grave 2; 2 – Barrow LXIV, Grave 2; 3 – Barrow LV; 4 – Barrow 2, Grave 1; 5 – flat Grave S.12; 6 – flat Grave S.27 (after Jaskanis 2013, pls XXI, LIX, LXV, CIII, CX, CXVIII).

Table 4.1. List of lengths and types of shafted weapon head sets from graves of the Bogaczewo Culture and the Sudovian Culture.

Location	Shafted weapon head types	Shafted weapon head lengths	Chronology/Remarks
Bogaczewo Culture			
Babięta, Mrągowo District, Site I, Grave 19[65]	?; ?	13 cm; 13 cm	B2/C1–C1a
Babięta, Mrągowo District, Site I, Grave 413a[66]	?; shafted weapon head with barbs Kaczanowski G	?	B2/C1–C1a
Babięta, Mrągowo District, Site II, Grave 16a[67]	Kaczanowski XIV; Kaczanowski XIV	20 cm; 20 cm	B2
Babięta, Mrągowo District, Site II, Grave 18a[68]	Kaczanowski XI; Kaczanowski X	24 cm; 23.5 cm	B2b–C1a
Bogaczewo-Kula, Giżycko District, Grave 297[69]	?; ?	*c.* 15 cm; *c.* 15 cm	?
Dłużec I, Mrągowo District, Grave 140[70]	Kaczanowski VII.1; Kaczanowski VII.2	22.2 cm; 24.2 cm	B2b
Dręstwo (Dreństwo), Augustów District, grave?[71]	Kaczanowski XIII; Kazakevičius I.V (B)	20.2 cm; 16.6 cm	B2b–C1a Bogaczewo Culture provenance is not entirely certain (in the case of the late chronology a Sudovian Culture origin cannot be excluded).
Koczek, Szczytno District, Site II, Grave 86[72]	Kaczanowski VII.2; Kaczanowski VII.2/X	23.3 cm; *c.* 20 cm	B2b–B2/C1
Kosewo, Mrągowo District, Site, 'Grave 600' (heterogenous assemblage)[73]	Kaczanowski VII; Kaczanowski XVIII; Kaczanowski G	18.2 cm; 15 cm; 12.2 cm	B2b (if it is a compact assemblage) or B2–C1 (if there are several assemblages)
Łabapa, Węgorzewo District, Grave 63[74]	Kaczanowski II.1.1; conical shafted weapon head?	16.3 cm; 12.5 cm	B2–C1a
Machary, Mrągowo District, Grave 188[75]	Kaczanowski XII.2; Kaczanowski I.3 (?)	16.5 cm; 22 cm	B2/C1–C1a
Mojtyny, Mrągowo District, Grave 26[76]	Kaczanowski VII.2; Kaczanowski VII.2	37.6 cm; 37 cm	B2b–C1a

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65 Prussia-Museum inventory books 7(1913).008; Prussia-Archiv PM-A 096/1, 233; Bitner-Wróblewska 2008a, pl. LXIII; Schmiedehelm's heritage 7.12.87a, 7.13.17, 7.13.19, 7.13.50.

66 Bezzenberger 1914, 136 fig. 31; Gaerte 1929, fig. 195:a; Moora 1938, 117; Prussia-Museum inventory books 7.089, 7.091; Prussia-Archiv PM-A 096/1, 250; Nowakowski 2014, 365 fig. 3:a; Schmiedehelm's heritage 7.13d.180, 7.13e.180, 9.21.9.

67 Prussia-Museum inventory books 7.106; Bitner-Wróblewska 2008a, pl. CXV; Schmiedehelm's heritage 7.13e.177, 7.13e.179; Prussia-Archiv PM-A 096/2, 268.

68 Prussia-Museum inventory books 7.106; Bitner-Wróblewska 2008a, pl. CXV; Schmiedehelm's heritage 7.13.18, 7.13e.178; Prussia-Archiv PM-A 096/2, 268.

69 Okulicz 1958, 69; Schmiedehelm's heritage A35.

70 Prussia-Archiv PM-A 1936/2, 274; PM-F 252 A4290/b; inv. no. Prussia-Museum VII.87.9343; Engel's heritage (in: Grenz's heritage).

71 Jaskanis 1967, 401–03 figs 2–4; Kontny 2008d, 96 n. 17, fig. 7 table 1; collection of the Podlachian Museum in Białystok, inv. no. MB/A/130, cat. nos 564, 566.

72 Jankuhn's heritage; Nowakowski 2013, 68 pl. 103:1–3; Jahn's heritage; Schmiedehelm's heritage 7.12.63, 7.13.30.

73 Nowakowski 2005, 362–64, 366–67 figs 1–2; Voigtmann's heritage; Schmiedehelm's heritage 7.13e.160, 9.21.9; Grenz's heritage; inv. no. Prussia-Museum VII.76.9284.

74 La Baume 1941b, pl. 30:centre; Kontny 2017a, 191–95 fig. 1; Prussia-Archiv PM-IXd1.1950/2, 1–9; inv. no. Prussia-Museum PM 1940.387–90; the shafted weapon head and the spear-butt survived in the so-called Prussia-Sammlung, inv. no. 2814.3 (head).

75 Prussia-Museum inventory books 12.039; Bitner-Wróblewska 2008a, pl. CCXX; Schmiedehelm's heritage 7.20d.142, 7.13e.138, 7.13e.139; *Prussia-Archiv* PM-A 1431/1, 011.

76 Hollack and Peiser 1904, 47 pl. II:26a–b.

Location	**Shafted weapon head types**	**Shafted weapon head lengths**	**Chronology/Remarks**
Onufryjewo, Pisz District, Grave 187[77]	Kazakevičius I.D./I.G; similar find	12.3 cm; ?	B2/C1–C1a
Paprotki Kolonia, Giżycko District, Grave 126A[78]	Kaczanowski XIII/XIV; Kaczanowski VIII.3	18.2 cm; 16.7 cm	B2
Paprotki Kolonia, Giżycko District, Grave 323[79]	?; Kaczanowski IX.2	16.2 cm; 13 cm	B
Przytuły, Olecko District, Grave 22[80]	Kaczanowski X; Łuczkiewicz F/1	28 cm; 29 cm	B1c
Romoty, Ełk District, Grave 72[81]	Kaczanowski XIV; Kaczanowski XIV	29.5 cm; 29.2 cm	B2b
Skomack Wielki, Ełk District, Site I, Grave 20a[82]	Kaczanowski VII; ?	20 cm; 19 cm	B2b
Spychówko, Szczytno District (research: Bezzenberger 1902), Grave 197[83]	Kaczanowski VII; Kaczanowski V.2	26 cm; 17 cm	B2b
Spychówko, Szczytno District (research: Hollack 1902), Grave 147[84]	Kaczanowski XVI; Kaczanowski XVI	19.5 cm; 20.5 cm	B2b–B2/C1
Stara Rudówka, Giżycko District, Grave 13[85]	Kaczanowski I.4/II.3; Kaczanowski XII.2	16.4 cm; 18.3 cm	B2b–B2/C1
Stara Rudówka, Giżycko District, Grave 161b[86]	?; ?	22.4 cm; 22.7 cm	B1
Stare Kiejkuty, Giżycko District, Grave II H154[87]	Kaczanowski XVII; Kaczanowski XVII	17.7 cm; 'slightly larger' find	Late part of C1a–C1b
Stręgiel II, Węgorzewo District, Grave 128[88]	Łuczkiewicz C3/Bochnak 7d; Łuczkiewicz C3/Bochnak 7d;	26 cm; 20 cm	A3–A3/B1
Wyszembork, Mrągowo District, Grave 21[89]	Kaczanowski VI.2; Kaczanowski IX (?)	18 cm; 10.8 cm surviving (+ *c.* 4 cm)	B2/C1–C1a
Wyszembork, Mrągowo District, Grave 33[90]	Kaczanowski VI.1; Kaczanowski XVII	24.7 cm; 17.4 cm	B2/C1–C1a

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[77] Jankuhn's heritage; Nowakowski 2013, 111 pl. 211:1–3; Grenz's heritage; Schmiedehelm's heritage 7.12.102a, 7.12.103, 7.13.23, 7.13.25, 7.13.77, 7.13d.1143, 7.13e.206; Prussia-Archiv PM-A 390/1–3, 115, 145; inv. no. Prussia-Museum PM VII.77.9291.

[78] Karczewski 1999, 90–92, 101 fig. XIV:2–7; collection of the District Museum in Suwałki, inv. nos 1873/96, 1877/96.

[79] Bogacki 2007, 46, pl. VIII:1–2; collection of the District Museum in Suwałki, inv. no. 3728/2002.

[80] Collection of the District Museum in Suwałki, inv. no. MS/A/115, cat. nos 648–51.

[81] Juga and others 2003, 217, 243 fig. 4230:3; Prussia-Archiv PM-A 966/1, 022, PM-F 788.

[82] Kotzan 1934; 1936, 90; Jaskanis 1977, 323 (as Grave 20b); Grenz's heritage; Prussia-Archiv PM-A 802/1, 114.

[83] Prussia-Museum inventory books 10(1902).039; Schmiedehelm's heritage 7.13e.199, 7.22.36; Prussia-Archiv PM-A 1781/2, p. 015; inv. no. Prussia-Museum PM 1902:451–54.

[84] Schmiedehelm's heritage 7.22.32–32a, 7.13e.93, 7.13e.139, 7.13.e.199; Voigtmann's heritage; Prussia-Archiv PM-A 1781/2, 41, PM-A 1781/2.28, 14.

[85] Gaerte 1929, fig. 196:f; Jahn's heritage (including a letter of Adalbert Bezzenberger from 22 July 1913 and redrawings of shafted weapon head sketches on the basis of drawings by Bezzenberger); Prussia-Archiv PM-A 2305/1.

[86] Moora 1938, 486; Nowakowski 1995, 36; 2007a, 21; Jakobson's heritage Rudowken 001.

[87] Bitner-Wróblewska 2008a, pl. CLXVI; Prussia-Museum inventory books 8(1912).206; Voigtmann's heritage; Prussia-Archiv PM-A 2272/1, 206c; Schmiedehelm's heritage 7.13.32–33, 7.13e.488.

[88] Nowakowski 1995, 25–26; 2002, 139; Kontny 2007a, 86–88 fig. 7 table 1; 2007b, 122, 129 fig. 4:b; Czarnecka and Kontny 2009b, 700, 719 fig. 4:c; Iwanicki and Juga-Szymańska 2007, 51; Jankuhn's heritage; Nowakowski 2013, 33 pl. 20; Jahn's heritage; Schmiedehelm's heritage 7.13.11, 7.13.12, 7.13e.4, 7.13e.63, 7.25.8.36; inv. no. Prussia-Museum PM 3841–3845.

[89] Szymański 2005, 69 table XIII:5, 8; collection of the Faculty of Archaeology, University of Warsaw, inv. no. 36/75.

[90] Szymański 2005, 69–70 pl. XXV; collection of the Faculty of Archaeology, University of Warsaw, inv. no. 58–60/75, 74/75.

Location	**Shafted weapon head types**	**Shafted weapon head lengths**	**Chronology/Remarks**
Sudovian Culture			
Osowa, Suwałki District, Barrow 114, Grave 2[91]	Kazakevičius II; Kaczanowski XII.2	18.9 cm; 12 cm	B2/C1–C1a
Szurpiły, Suwałki District, Grave XXII[92]	Kaczanowski XVII/ Kazakevičius IV.A; ?; conical shafted weapon head (?);	16 cm; 25 cm; ?	C1
Szwajcaria, Suwałki District, Barrow 2, Grave 1[93]	Vennolum/Ilkjær 15; Kaczanowski XV	33.7 cm; 32.4 cm	C1b

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[91] Jaskanis 1962, 274–75 pl. VII:3–10; collection of the Podlachian Museum in Białystok, inv. no. MB/A/128, cat. no. 542.
[92] Żurowski 1961, 71–73 pls XVIII, XIX:1–22.
[93] Jaskanis 2013, 76–80, pls CXVII–CXXV; Kontny 2013a; collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/4498.

The length of the weapon from the grave in Barrow 23 in Osowa[94] was perhaps 200 cm, in the case of Barrow 41 at this site — 200 cm,[95] while in Barrow 14–200–20 cm,[96] and in Barrow 9 in Żywa Woda — up to 200 cm (Fig. 4.3).[97] This implies that the polearms were in most cases adjusted to the warrior's height thus they were convenient in dynamic close combat. On the other hand, their size offered very limited opportunities for use in a battle formation (too short to allow keeping the adversary at a distance from one's own battle line).

Shafted weapon heads in the discussed cultures originated in different traditions.[98] In the case of the Bogaczewo Culture, there was a clear preponderance of Przeworsk Culture patterns (Fig. 4.4:1–5, 7–8). Almost all Przeworsk Culture types can be found there (Fig. 4.5), save the latest ones, that is, those dated to phases in which weapons were no longer deposited into Masurian graves. The most popular types were VII, VIII, and XII according to Kaczanowski.[99] Many of these have some local traits — a V-shaped transition part between the blade and socket was frequently used (Fig. 4.5:3, 5), and some artefacts were manufactured in a less careful manner than their prototypes. Finds that are completely original with regard to their morphology are rare and they are usually made in a rather primitive way (Fig. 4.7). Nails for fastening pole weapon heads on shafts were often in use (single openings can be seen in sockets), while such a habit was generally unknown in the present-day central and southern Poland, where shafted weapon heads were fastened with transverse rivets. All this demonstrates that the discussed weapons were manufactured in Balt smithies. Examinations of artefacts' decorations lead to similar conclusions. On the items from the Bogaczewo Culture there are ornaments which are known from the Przeworsk Culture, such as motifs on blades: stitch pattern (Fig. 4.4:7–8; also recorded in the Dollkeim-Kovrovo Culture, Fig. 4.4:9), negative pattern (Fig. 4.4:3–4), or a motif of an eye on the socket (Fig. 4.4:5). However, even these decorations bear clear local traits which manifest in different ways of making the ornament or in a unique composition.[100] Only the shafted weapon head with wavy edges from Grave 67 in Łabapa (dated as early as the turn of the Pre-Roman and the Roman Period, Fig. 4.4:1) can be considered a Przeworsk Culture or Oksywie Culture import. Other similarly shaped artefacts are of local provenance (Fig. 4.4:2).[101] In the bog deposit at Czaszkowo, along with a number of Roman Period shafted weapon heads with local traits, there was also an artefact with barbs, with a socket which overlaps on the blade in a conical manner (Fig. 4.6);[102] this is a Scandinavian trait.[103] In all probability (bearing in mind that the artefact's point is broken off) it should be classified as Type Veum,[104] which was one of the markers of the chronological Group Vestly, dated to the second quarter of the fifth century. It could also belong to Type Ugulen from the slightly later Group Øvsthus.[105] This means that the find should be related to the post-Bogaczewo Culture horizon.

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[94] Jaskanis and Jaskanis 1961, 31–32 fig. 9.
[95] Jaskanis and Jaskanis 1961, 39–41 fig. 24.
[96] Jaskanis 1958, 90–92.
[97] Ziemlińska-Odojowa 1961a, 51–52 fig. 5.
[98] Kontny 2007b.
[99] Kaczanowski 1995.
[100] Czarnecka and Kontny 2009b, 718–19 fig. 4:b, c; Kontny 2008c, 147, 149 fig. 5:e–g; Kontny 2017a, 200–01 figs 1:1, 2:1, 7.
[101] Kontny 2007a, 81–86 figs 5, 6:a; 2007b, fig. 3:f–h.
[102] Kosiński and others 2016, 175–76 fig. 9.
[103] Ilkjær 1990, 44; Bemmann and Bemmann 1998, 174; Andrzejewska and Demkowicz 2015, 116–18.
[104] Bemmann and Hahne 1994, 442 fig. 67:4, 5.
[105] Bemmann and Hahne 1994, 322–29.

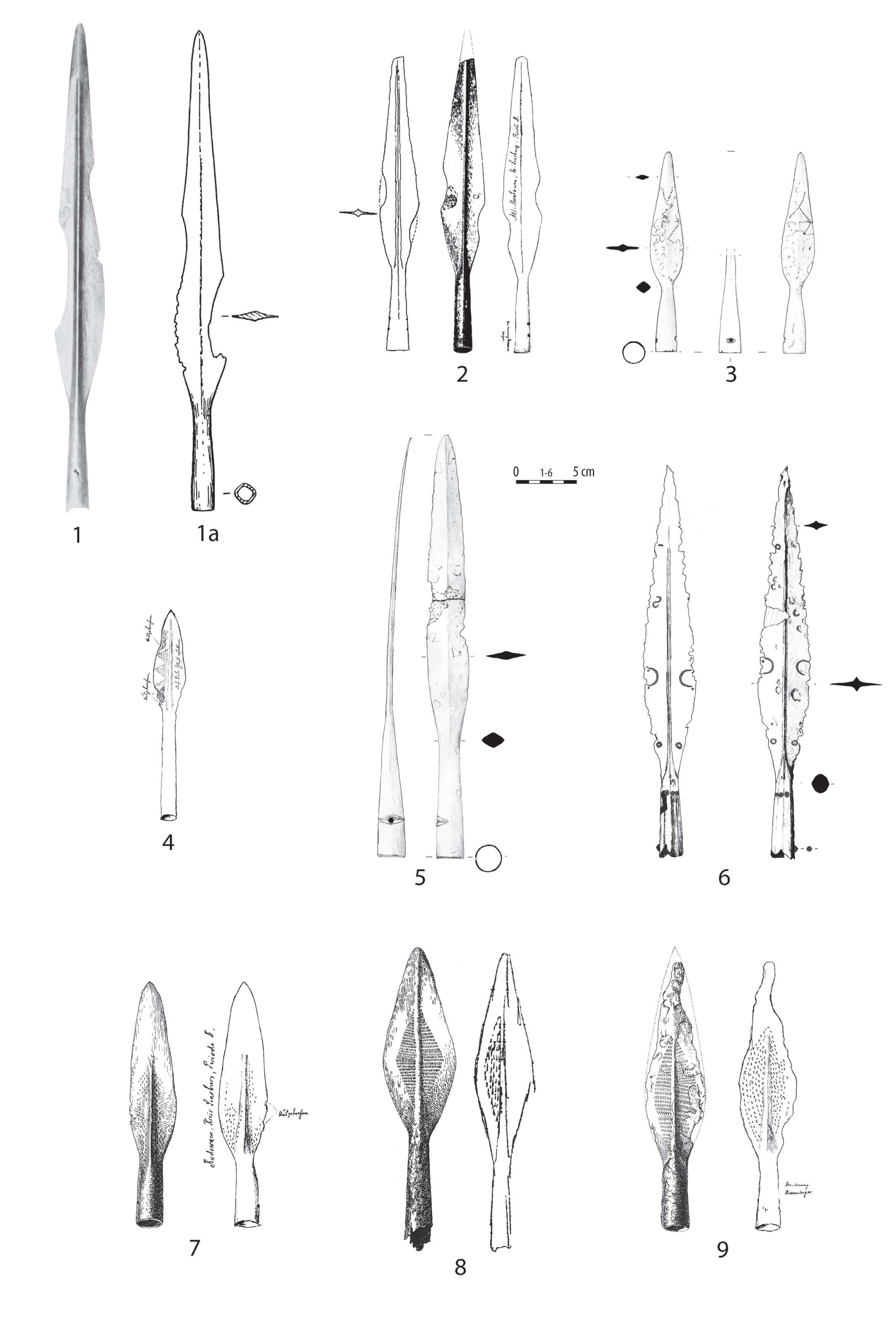

Figure 4.4. Ornamented shafted weapon heads from the West Balt milieu, 1 — Łabapa, Grave 67 (Bogaczewo Culture) and an analogous form from Wesółki, Grave 45 (Przeworsk Culture), 2 — Muntowo, Grave 120 (Bogaczewo Culture), 3 — Łabapa, Grave 63 (Bogaczewo Culture), 4 — Stara Rudówka, Grave 13 (Bogaczewo Culture), 5 — Judziki, stray find (Bogaczewo Culture), 6 — Szwajcaria, Barrow 2, Grave 1 (Sudovian Culture), 7 — Stara Rudówka, Grave 13 (Bogaczewo Culture), 8 — Marcinkowo, Grave 13 (Bogaczewo Culture), 9 — Tûlenino, Grave 154 (Dollkeim-Kovrovo Culture). 7–9 — not to scale (after Kontny 2017b, fig. 2).

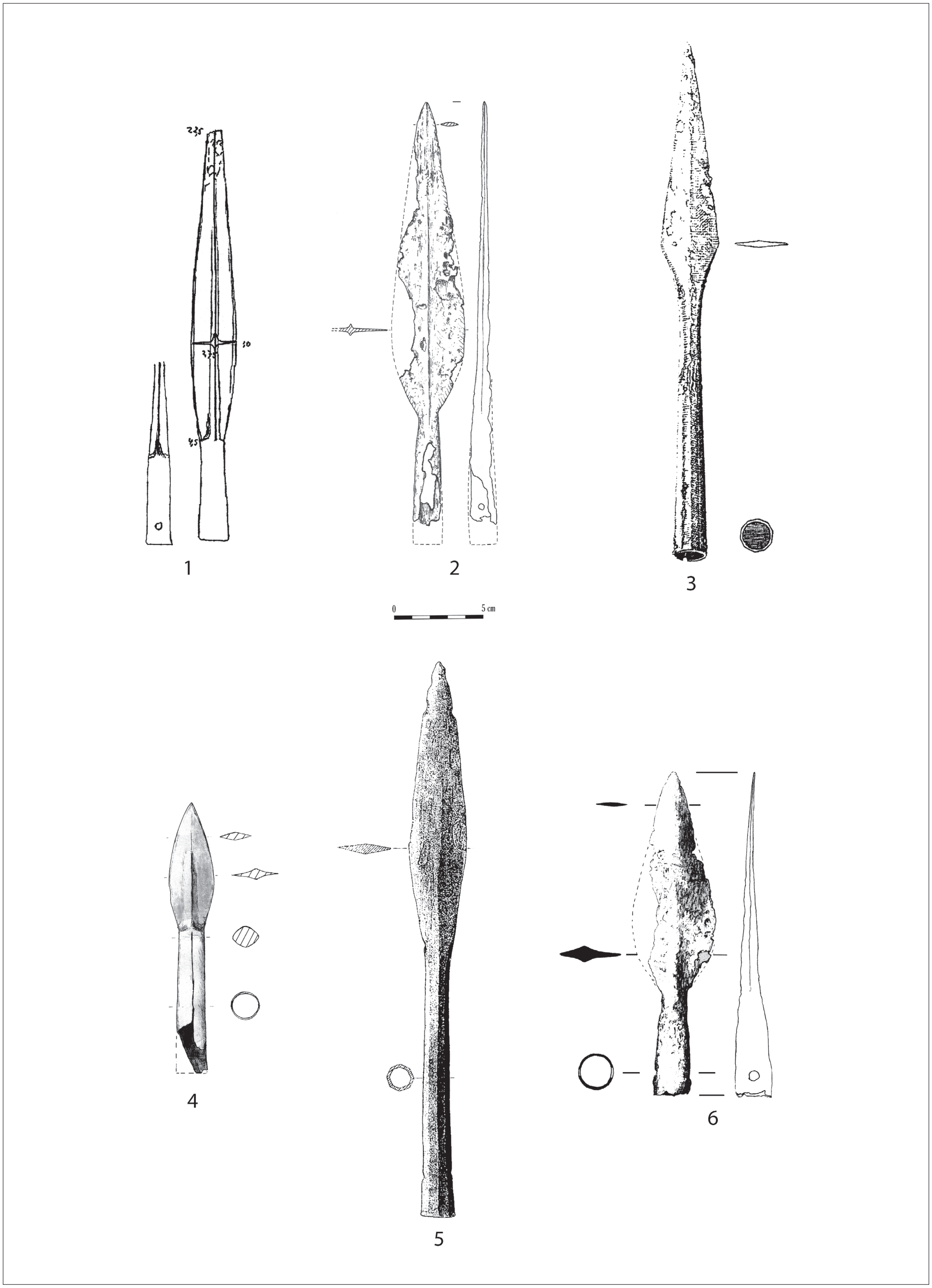

Figure 4.5. Shafted weapon heads from the Bogaczewo Culture. 1 — Woźnice, stray find, Type I according to Kaczanowski; 2 — Wyszembork, Grave 33, Type VI according to Kaczanowski; 3 — Muntowo, Grave 47, Type VII according to Kaczanowski; 4 — Bogaczewo-Kula, grave in a stone chest (?), Type XII according to Kaczanowski; 5 — Miętkie, stray find, Type XIII according to Kaczanowski; 6 — Wyszembork, Grave 12, Type XVII according to Kaczanowski (after Kontny 2007b, fig. 6).

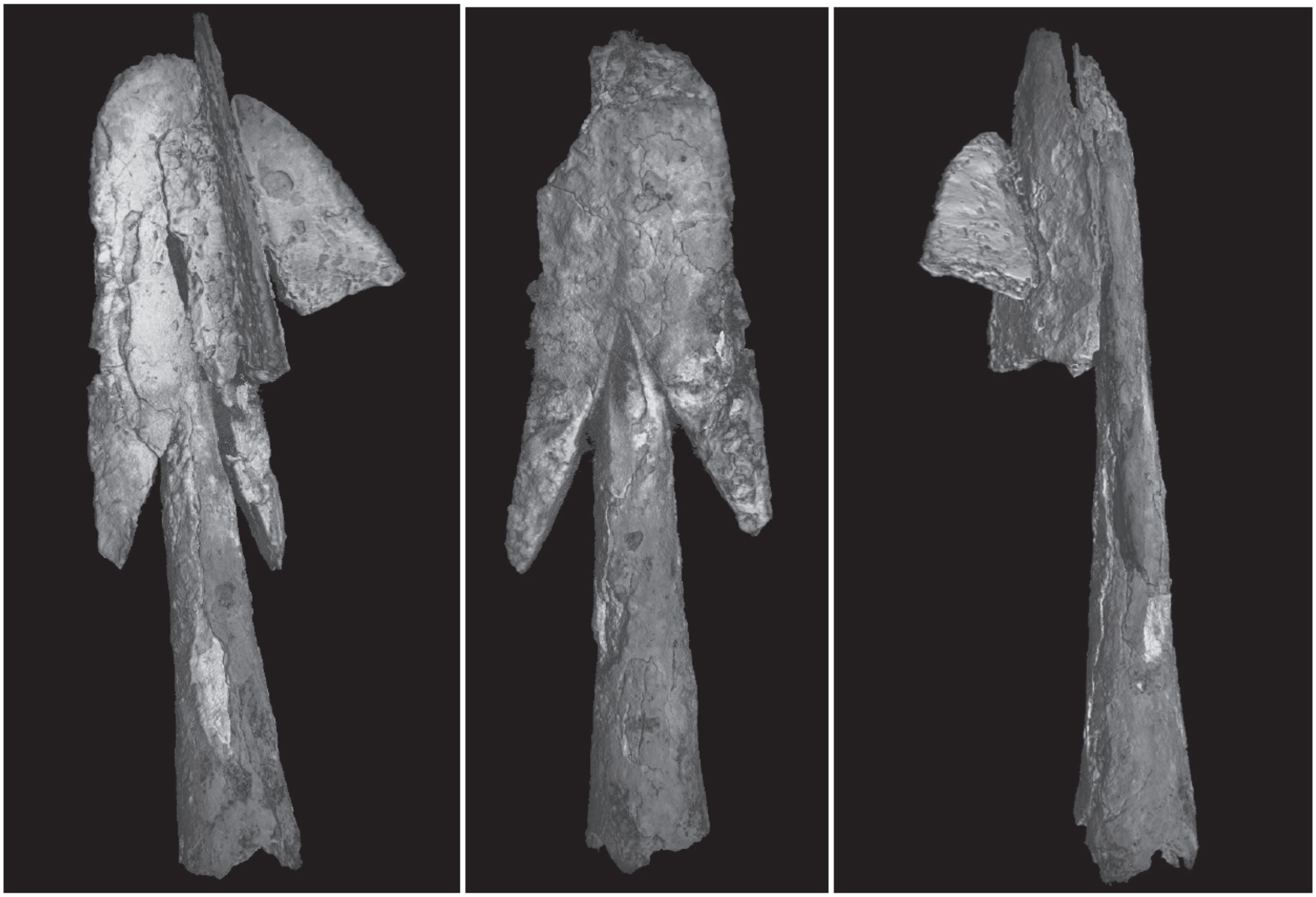

Figure 4.6. Scandinavian type shafted weapon head from Czaszkowo. CT image (after Kosiński and others 2016, fig. 9:c–e).

In the Sudovian Culture, Przeworsk Culture analogies can be pointed out especially for the earliest finds. This should be explained with the origin of this cultural unit, which was to a great degree related to migrations of Bogaczewo Culture people[106] who were using the Przeworsk Culture type of shafted weapons.[107] However, commencing with Subphase C1b there is a strong preponderance of shafted weapon head forms that fit within the classification of Vytautas Kazakevičius, albeit this typology is not very precise (Fig. 4.8).[108] Thus, they match native Balt traditions, and such forms were also numerous in the territories of cultural groups in Lithuania and Latvia, as well as in the Dollkeim-Kovrovo Culture. Artefacts that were the most widespread in the Sudovian Culture can be classified as Type IB (IБ), next — IVA, and then Types IA, ID, and II. It is also possible to point out individual examples of imported

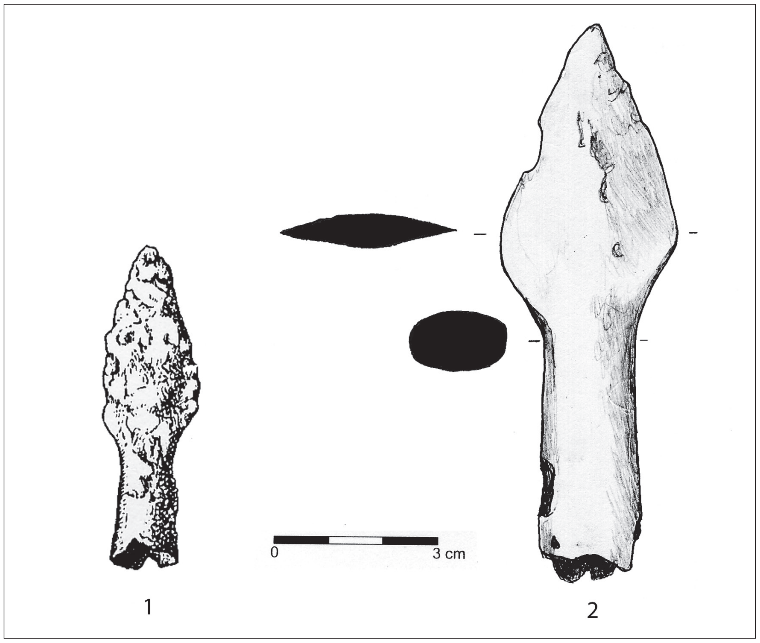

Figure 4.7. Local forms of shafted weapon heads from the Bogaczewo Culture. 1 — Spychówko, stray find; 2 — Bogaczewo-Kula, stray find (after Kontny 2007b, fig. 7).

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[106] Nowakowski 1995, 76–77.

[107] Kontny 2007b, 128.

[108] Kazakevičius 1988.

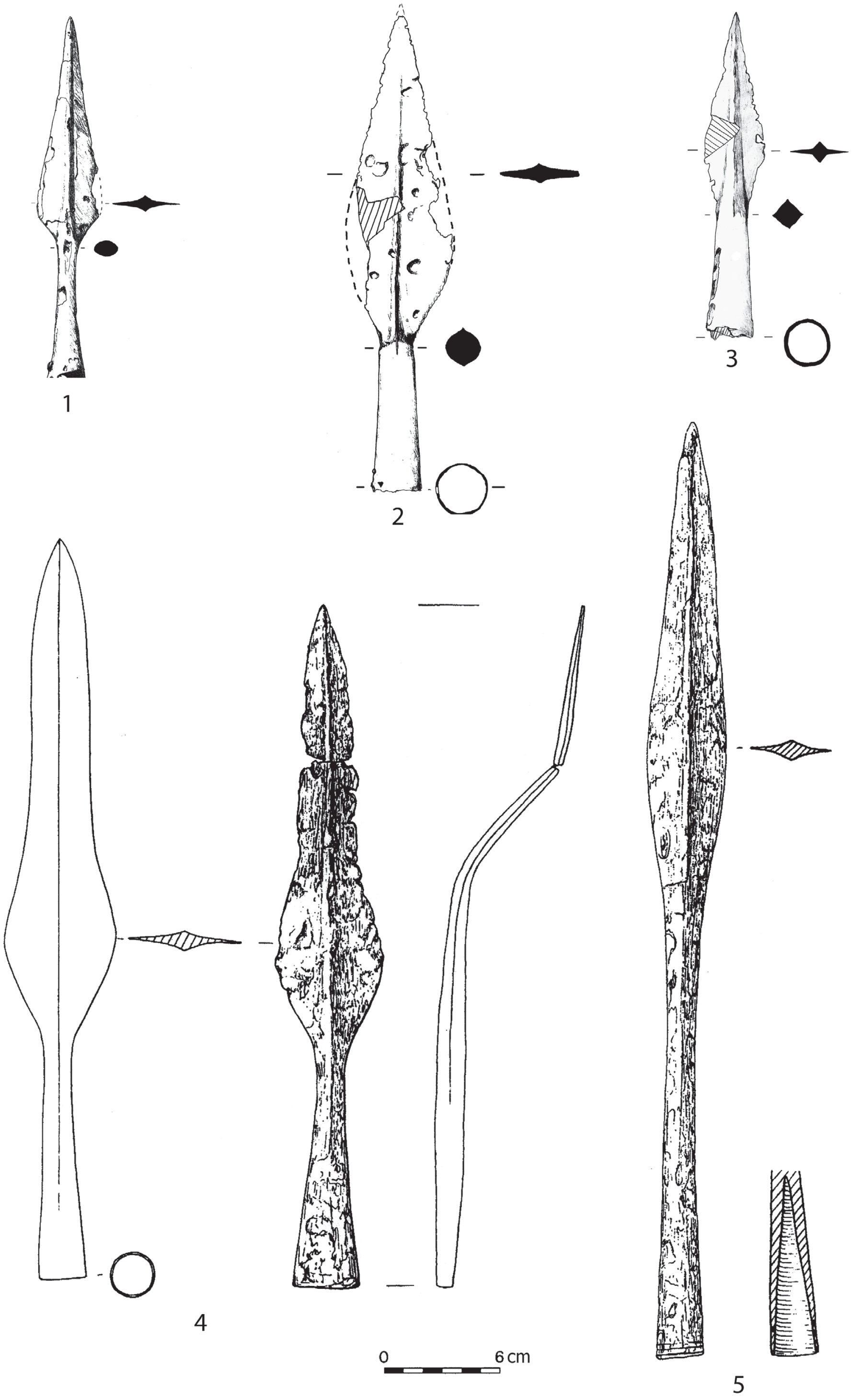

Figure 4.8. Shafted weapon heads from the Sudovian Culture. 1 – Netta, stray find, Type IB (variant) according to Kazakievičius; 2 – Szwajcaria, Barrow 8, Type IVA according to Kazakievičius; 3 – Szwajcaria, Barrow 5, Type IB according to Kazakievičius; 4 – Netta, Grave 55, Type II according to Kazakievičius; 5 – Netta, Grave 42B, Type ID (variant) according to Kazakievičius (after Kontny 2007b, fig. 10).

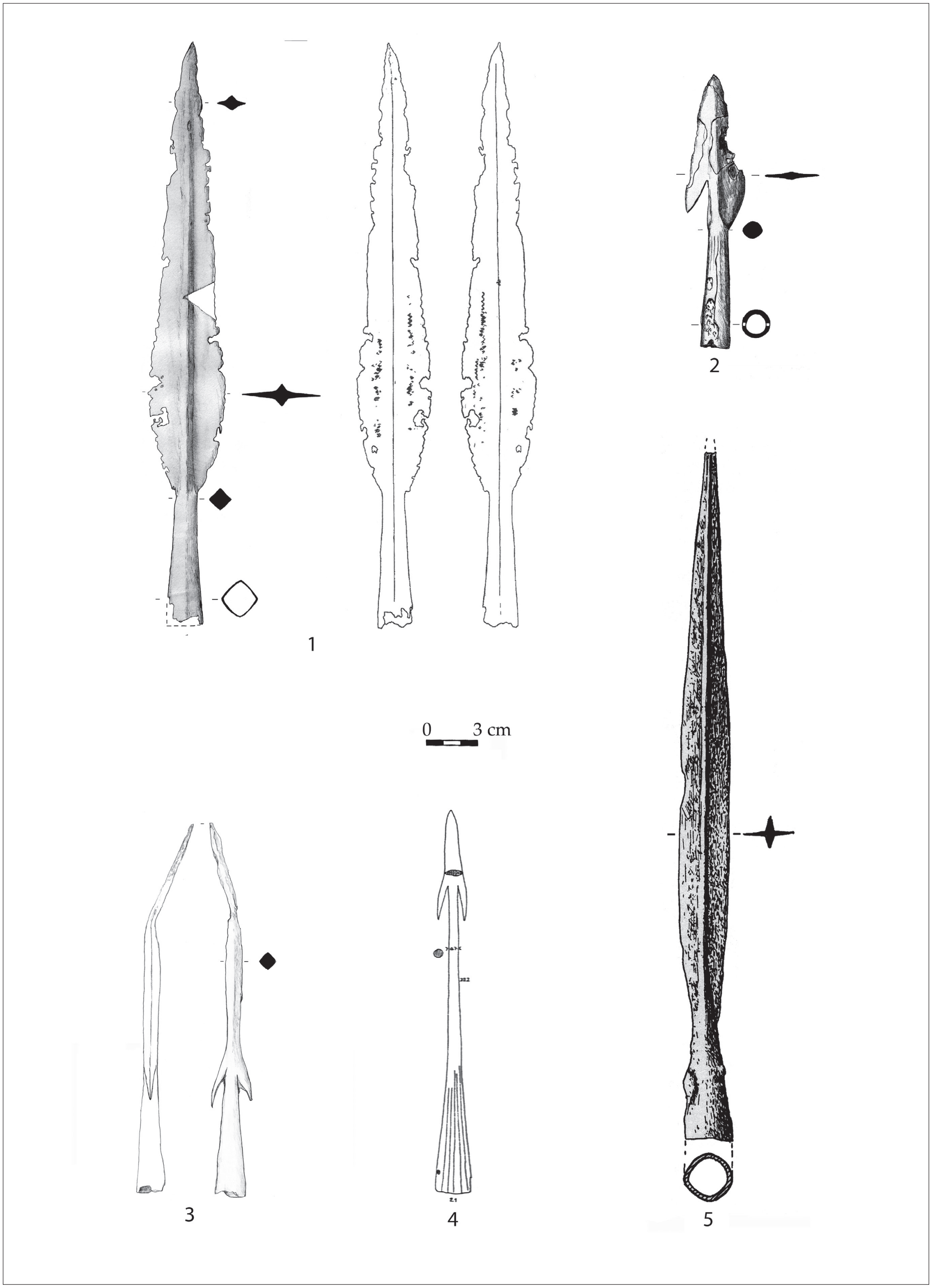

Figure 4.9. Imported shafted weapon heads of Scandinavian types from the West Balt milieu as well as an imitation of a north European form. 1 — Szwajcaria, Barrow 2, Grave 1: Type Vennolum; 2 — Netta, Grave 81: imitation of the north European Type Saeli/Ilkjær 23 with a single barb, made from a shafted weapon head of Type VIII according to Kaczanowski; 3 — Pervomajskoe, Grave 49: Type Sättra; 4 — Dubravka, Grave 28: Type Skuttunge; 5 — Osowa, Barrow 13: Type Mollestad (after Kontny 2017b, fig. 1).

Scandinavian shafted weapon heads (Fig. 4.9:1–2, 5), which is different from the situation in the territory of the Masurian Lakeland in the Roman Period.[109] The only inlaid shafted weapon head which is known from the Balt lands is a Type Kaczanowski XV artefact from Grave 1 in Barrow 2 in Szwajcaria (Figs 4.4:6, 4.17:39, 4.18:58). It was accompanied by an imported shafted weapon head of the Scandinavian Type Vennolum, which was ornamented with an engraved motif (Figs 4.7:40, 4.8:57, 4.9:1). The find from Szwajcaria was decorated with motifs taken from a repertoire of ornaments which occur on central European shafted weapons, including solar and lunar patterns.[110] In spite of similarities between the ornaments, this was the work of a local craftsman. This is demonstrated by local details of the ornament (incised silver wire on the rivet head in the socket) and an atypical technology of manufacture (motifs were cut out in a silver sheet and then hammered into cavities in the surface of the blade, while in the remaining shafted weapon heads from this period molten metal was poured into surface cavities).[111]

In the Bogaczewo Culture, analogously to the Dollkeim-Kovrovo Culture, there are finds of conical fittings dated to the Roman Period. These are believed to be spear-butts (Fig. 2.16:6).[112] With regard to their morphology, such artefacts strongly resemble solutions adapted from the Celtic world and widespread in cultures of Barbarian Europe of the Late Pre-Roman Period (i.e. the Przeworsk Culture, the Oksywie Culture, and the territory of the north European *Barbaricum*).[113] Concerning the Sudovian Culture, only one similar artefact is known so far from Szurpiły.[114] This, however, is a stray find, and its Roman Period origin is not completely certain. The presence of such forms in the West Balt milieu seems to demonstrate a long existence of Late Pre-Roman Period traditions. Butt caps in the Przeworsk Culture disappeared as early as the beginning of the Early Roman Period. However, it seems very probable that at least some conical fittings (those with penetrative narrow ends) were not used as spear shoes, but rather as javelin heads.[115]

Swords

One of the first well-founded and well-established observations dealing with Balt weaponry concerned swords. This idea was proposed by Wojciech Nowakowski, who assumed that swords had been only occasionally used by the Balts. Instead, they preferred blunt weapons or battle knives. Their preference for short-stabbing weapons was also expressed in the small sizes of a few swords, which were sometimes intentionally shortened.[116] A later rapid increase in the number of available sources for Balt weaponry did not generally incline this researcher to change his opinion. This was due to the fact that in newly found archive sources, and surviving parts of pre-war collections, this scholar managed to find almost exclusively data that allowed for the verification of known examples of edged weapons. However, he did not encounter new finds.[117]

Nowakowski linked the uniqueness of swords with Tacitus's narrative. In his work *De origine et situ Germanorum* (commonly known as the *Germania*) from about AD 98, Tacitus described the people of the Aesti, identified with the Balts living in the Sambian Peninsula.[118] He wrote: 'rarus ferri, frequens fustium usus' (They rarely use iron weapons, more often clubs).[119] It seems, however, that in this case one may be dealing with a topos. It reflects a well-established Roman stereotyped opinion which was far from true. A similar situation is present in the case of Tacitus's description of the shafted weapons of the Germanic people: 'Ne ferrum quidem superest, sicut ex genere telorum colligitur. Rari gladii aut maioribus lanceis utuntur' (Even iron is not plentiful with them, as we infer from the character of their weapons. But few use

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[109] Kontny 2007b, 128 fig. 9.

[110] The bog deposit in Czaszkowo yielded a shafted weapon head on which traces of silver survived. These may be traces of inlay (see Nowakiewicz and Rzeszotarska-Nowakiewicz 2012, fig. 32). However, as the state of preservation of the artefact is extremely poor, its chronology cannot be determined. Therefore, it cannot be excluded that this find is related to the Migration Period part of the deposit.

[111] Kontny 2007b, 125–26 fig. 5; 2013a, 135, 140 fig. 4.

[112] Lower fittings of shafts, which were meant to counterbalance the weight of the shafted weapon head. These could also be used as an additional means of delivering strikes backward or in case the shafted weapon head was broken off. Apart from that, they also rendered it possible to drive the weapon into the ground.

[113] Kontny 1999, 128–34.

[114] For this information I am indebted to Ludwika Jończyk from the Faculty of Archaeology, University of Warsaw, who carried out research on settlements in Szurpiły.

[115] Kontny 2013b, 206–07 fig. 5; 2017a, 194–95.

[116] Nowakowski 1994a, 379–91.

[117] Nowakowski 2007b, 85–94.

[118] The late first century is the time of the Dollkeim-Kovrovo Culture formation in Sambia and in adjacent territories, see Nowakowski 1994a, 379; 2007b, 45–47; Kolendo 2009, 21. This culture lasts in the Roman Period and the Migration Period. Groups represented by this material culture owed their special status to natural resources, i.e. amber. Amber was present there both in its eroded form (dredged and gathered on beaches) and as a fossil raw material. This petrified resin was very popular in Rome, which is why Roman merchants arrived in this territory frequently enough to provide the Empire with detailed pieces of information about the Aesti. Namely, Tacitus's narrative is full of details; it even contains remarks on the language used by the local population, see Kolendo 1998c, 34; 2008, 176; 2009, 20–25.

[119] Tacitus, *Germania*, XLV. 3.

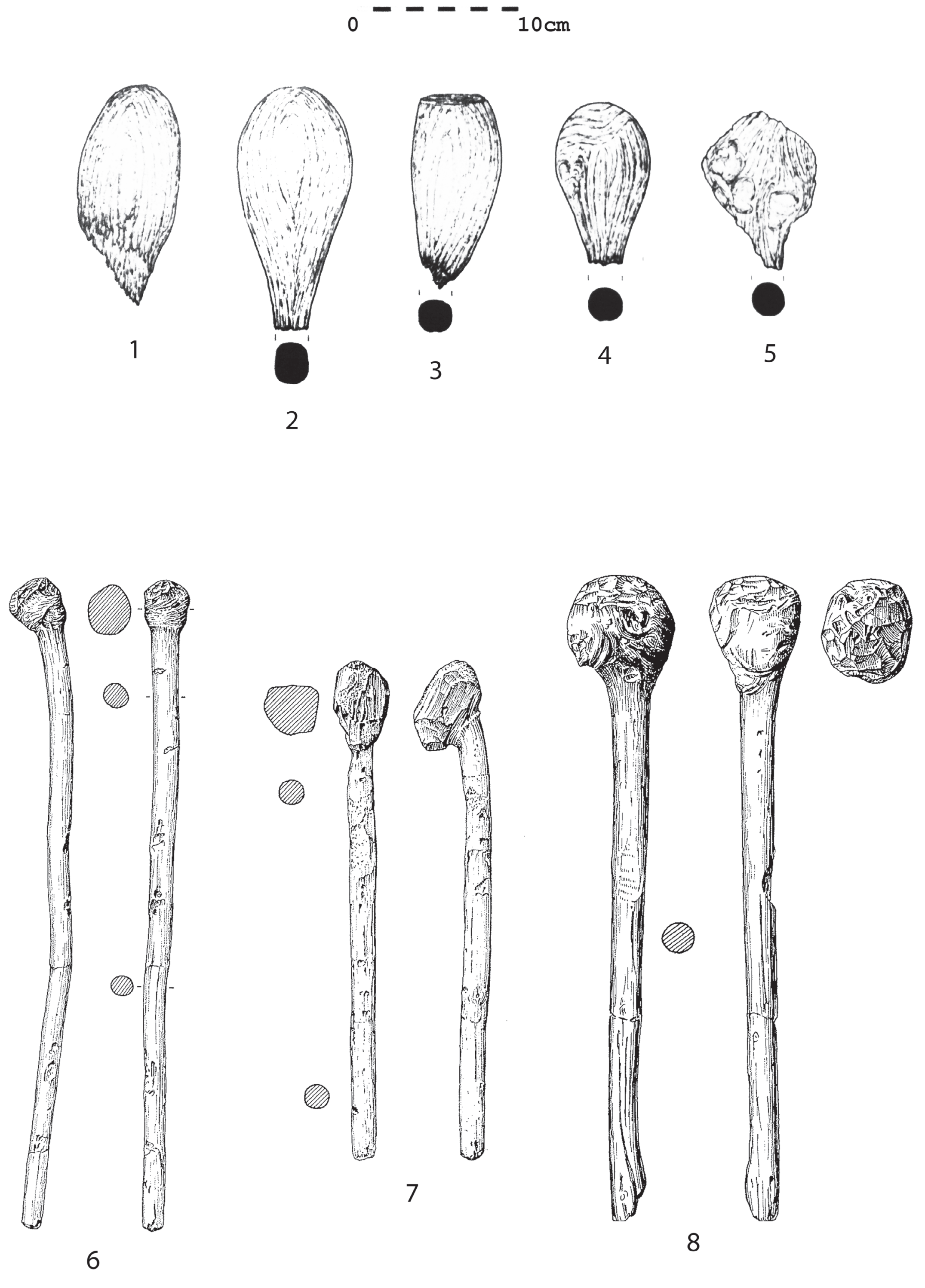

Figure 4.10. Pear-like club heads from the West Balt Barrow Culture (1–5) and sticks from the sanctuaries in Oberdorla (6–8). 1 — Mołtajny, Kętrzyn District; 2–5 — Pieczarki, Węgorzewo District; 6 — Oberdorla, Ldkr. Unstrut-Heinich, Sanctuary La20; 7 — Oberdorla, Sanctuary La01; 8 — Oberdorla, Sanctuary MR5 (after Kontny 2015b, fig. 3).

swords or long lances).[120] This is obviously not true, as swords were quite widespread among the Germanic peoples,[121] and the same can be said about spears with large spearheads.[122] The account concerning the use of clubs/sticks[123] by the Aesti people also provokes doubts. Although blunt weapons made of organic materials were used in the past, in the protohistoric period there is almost no evidence that such weapons were in use in the *Barbaricum*. An exception is offered by finds from the sanctuaries in Oberdorla in Thuringia, dated to the La Tène Period and the Roman Period (Fig. 4.10:6–8),[124] by clubs from a bog offering site from the first century AD in Alken Enge in eastern Jutland,[125] and by miniatures of clubs suspended on a golden chain from Hoard 1 in Szilágysomlyó (Şimleul Silvaniei) in Transylvania, dated to the Early Migration Period.[126]

That being said, one should not take into consideration images of clubs in the hands of Germanic warriors depicted in reliefs on Trajan's Column. These images were meant to demonstrate the primitiveness and savagery of the Barbarians and are, in all probability, far from an accurate depiction of them.[127] In any case, the aforementioned finds from Oberdorla were not intended for combat use, but were meant to be hunting weapons. In the case of the discoveries from Alken Enge, such clubs were used for the execution of war prisoners.[128] It is entirely possible that Tacitus's narrative is anachronistic. In some cases (albeit not numerous) pieces of information that were stated by the Roman historian were outdated, e.g. in the description of the Venethi people (it concerns cultural circumstances from a period of more than a century earlier),[129] or in the characteristics of weapons used by the Gothones, the Rugii, and the Lemovii tribes (the mentioned short swords are in all probability weapons from the Late Pre-Roman Period).[130]

It seems that Tacitus's account concerning the *fustes* should be backdated and linked with the West Balt Barrow Culture which survived until the beginning of the first century AD in the Sambian Peninsula, especially as wooden clubs with pear-like heads were recorded in the territory of this culture (Fig. 4.10:1–5). In non-militarized communities where metal (iron in this case) was rare, there may have been no distinction at all between hunting and combat weapons, which is evidenced by numerous ethnographic examples. One is probably dealing here with such multifunctional weapons which were soon (that is, in the period associated with the Dollkeim-Kovrovo Culture) replaced by blunt weapons with iron blades.[131] Right now, it is difficult to decide which hypothesis is more accurate — is Tacitus's narrative a topos, or rather an anachronism?

Nowakowski's list of Bogaczewo Culture, Sudovian Culture, and Dollkeim-Kovrovo Culture swords (Fig. 4.11) could be completed with a sword fragment from Grzybowo, Giżycko District (former Grzybowen, Kr. Lötzen) that was found near a Bogaczewo Culture necropolis.[132] However, the artefact's chronology provokes doubts. While there are some morphological similarities to Roman Period sword types (with special reference to the Early Roman Period Types Biborski I/5 or I/6, or to the Roman Type Newstead), the find in question was made of liquid metal. In my opinion, in the light of present-day knowledge, this does not allow for such an identification.[133] Aside from this artefact, one can point out at least a dozen or so swords (including a few unquestionable Roman imports made with pattern-welding technology), which are mainly known from the sacrificial offerings in Wólka[134] and Czaszkowo. The most spectacular finds related to edged weapons are a golden cross-guard fitting and a scabbard mouth fitting from Czaszkowo.[135] The latter was originally inlaid, perhaps with semi-precious stones (Fig. 4.12). What is more, a stone sword bead from the site must be mentioned. It is speculated that the aforestated finds suggest links to the Byzantine, or at least the Mediterranean milieu.[136] This issue, however, is far from determined, and the same applies to the artefacts' chronology. Concerning the cross-guard fitting, there are similarities to Asian type *spathae*, whose cross-guards were often fitted with a golden sheet.[137] Quite obviously, there are also differences. On

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[120] Tacitus, *Germania*, VI. 1.

[121] Cf., e.g., Biborski 1978, 53–165; 1994d; Biborski and Ilkjær 2006; Miks 2007; Kontny 2004a, 151–53; 2008a, 121 graph 11.

[122] Kontny 2008a, 108, 110–17.

[123] The term *fustis* (sing.) that was used in this narrative is known in the Roman world as a reference to a military weapon that was in fact used for police purposes (crowd dispersal) and also in tax collection, see Speidel 1993, 137–49.

[124] Behm-Blancke 2002–2003, 39–40, 50, 53, 89–90, 145, 147, 149, 185–86 pls 24:4, 34:11, 37:10, 78:4, 100:1–6, 117:6.

[125] Personal communication, Dr Mads Kähler Holst from the Moesgård Museum, who coordinated excavations at the site; see Holst and others 2018, 5921 appendix XVI fig. S:6.d.

[126] Gschwantler 1999, 67, 70 figs 11, 19.

[127] Kontny 2015b, 275 fig. 1:3–4.

[128] Kontny 2015b, 279.

[129] Nowakowski 1996a, 190–91.

[130] Kontny 2008b, 184.

[131] Kontny 2015b, 279–80.

[132] See Peiser 1919a.

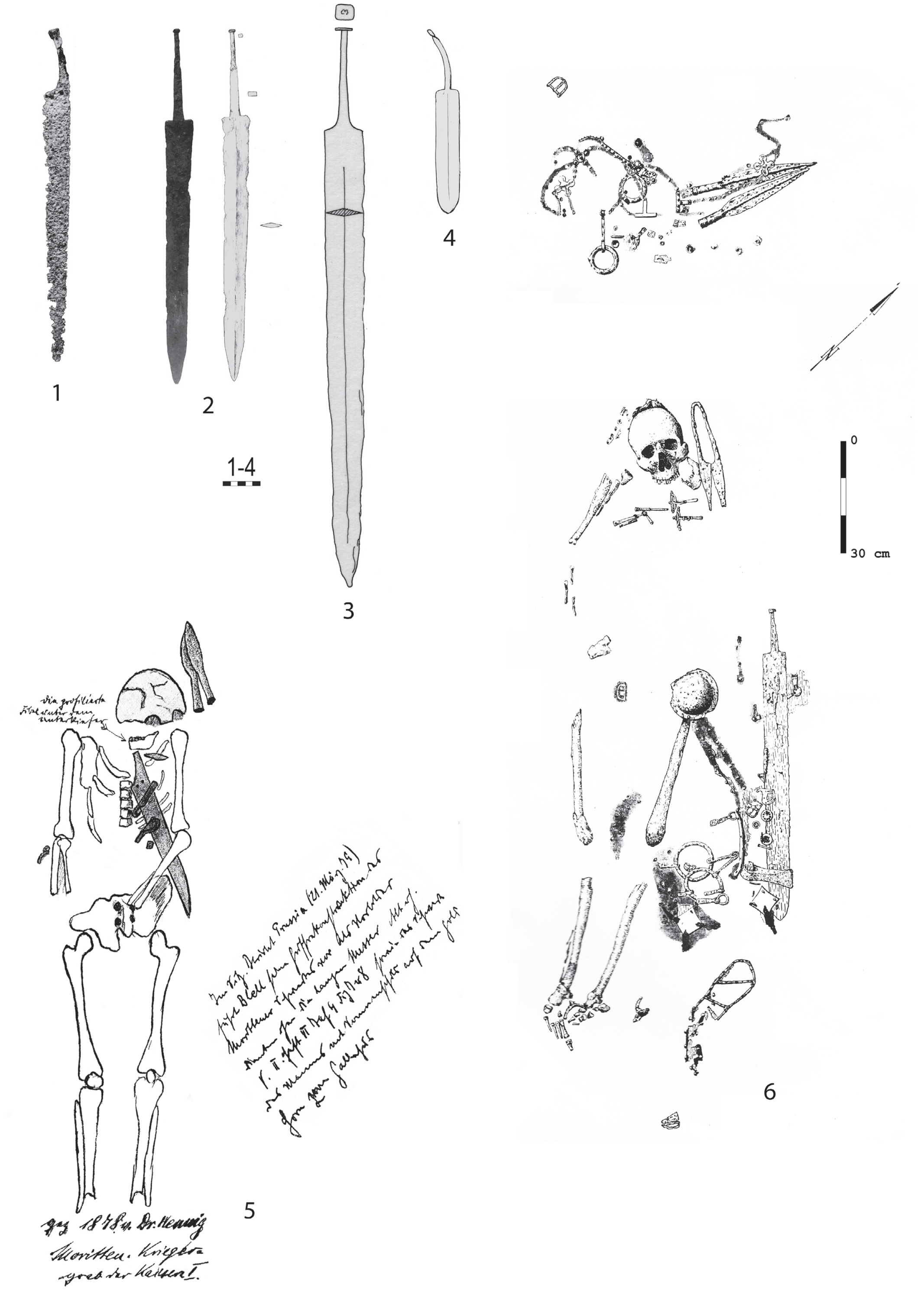
[133] Żabiński and others 2016, 97–139, cf. especially n. 8, with further reading.

[134] Kontny 2015a, 315, 318–19 fig. 1, with further reading.

[135] Żabiński 2016, 123–28.

[136] Nowakiewicz and Rzeszotarska-Nowakiewicz 2012, 74–78 figs 51–53; Syta and Wagner 2016, 187–95 fig. 1; Miśta and others 2016, 24–27.

[137] Miks 2007, 192–95 fig. 31:A.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Moritten. Krieger-
grab der Kellen I.
6

Figure 4.11. Swords from the West Balt milieu. 1 — Sibirskoe, inhumation grave; 2 — Skomack Wielki, Grave 23; 3 — Parussnoe; 4 — Fedotovo; 5 — plan of the inhumation grave from Sibirskoe; 6 — plan of Grave 1 from Barrow 2 in Szwajcaria (after Kontny 2017c, fig. 2).

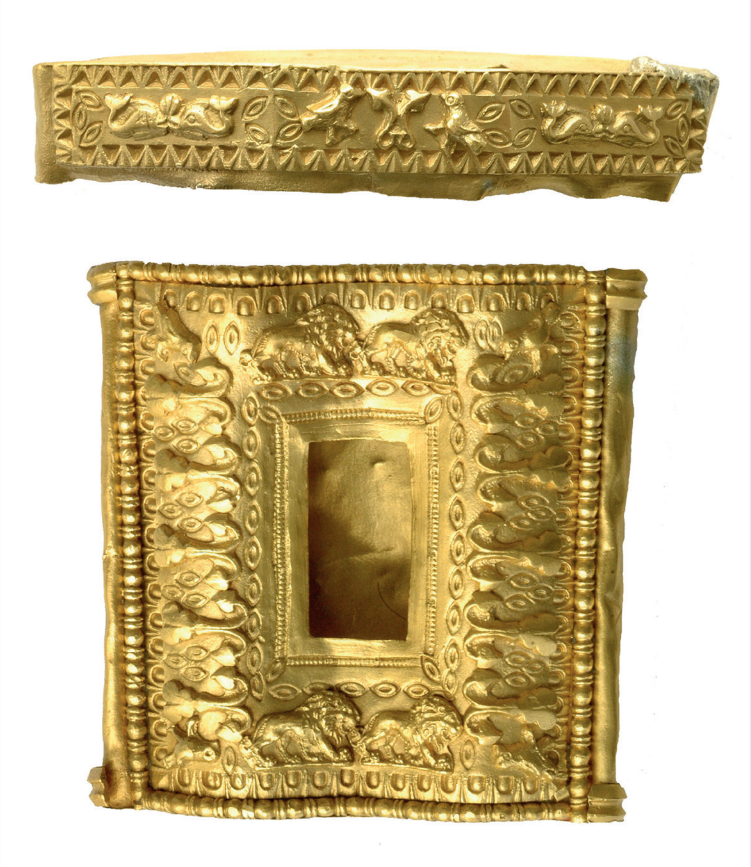

Figure 4.12. Golden sword cross-guard and scabbard mouth from Czaszkowo (after Nowakiewicz and Rzeszotarska-Nowakiewicz 2012, fig. 82).

one side of the cross-guard's golden sheet there is an ornament with floral and zoomorphic (birds, dolphins) motifs. The construction suggests an Early Migration Period chronology, with special reference to Phases D2 and D2/D3,[138] i.e. the period when the Bogaczewo Culture disappears. Furthermore, the ornament implies associations with the Roman world (dolphin).

The scabbard mouth fitting was manufactured in a similar style, with the use of the same dies with a lenticular outline. Therefore, its chronology is in all probability convergent, although it must be admitted that a precise analogy to this find is not known. All in all, scabbard fittings of similar size, including those that were inlaid with stones, were typical of the nomadic milieu from the late fourth to the mid-fifth centuries.[139] In this case, however, it is also possible to point out Mediterranean motifs, namely images of lions and floral patterns, as well as an astragal framing. It is possible that the sword bead is of similar chronology. This is a large artefact (its original diameter was about 5 cm), and such finds occurred in the first half of the fifth century. Later artefacts did not exceed 4.1 cm in diameter.[140] All three finds may have been part of the same set and they may have originated in the contact zone of the nomadic and Roman worlds.

An artefact from Czaszkowo which was identified as a phalera[141] should perhaps be considered a vestige of a box-shaped sword scabbard chape. The surviving fragment, i.e. a band-shaped edge and part of the back plate, suggests that the artefact was originally round in shape. Roman box-shaped scabbard chapes were known since the Marcomannic Wars, but mainly in the third century, while finds from the *Barbaricum* are believed to be related to Phase C2.[142] Such artefacts were made of copper alloy, but also of iron, silver, and bone. If this assumption is true, the discussed find would belong to a group of smaller artefacts of this kind. These were in use no later than the first part of the third century.[143] However, on the basis of the surviving fragment it is difficult to determine whether we are dealing with a Roman import or a Barbarian imitation. The latter are especially well known from Scandinavia, where they were in use in Phase C1 and, occasionally, Phase C2.[144]

A few other finds which evidence the use of swords can be added to this group.[145] It is possible to mention here, i.e. a presumed sword scabbard mouth fitting (Fig. 4.13:1) from Grave 275 in Onufryjewo, Mrągowo District (former Onufrigowen, Kr. Sensburg),[146] a C-shaped clasp that was used for transverse joining of the scabbard from Grave 148 in Nowy Zyzdrój, Mrągowo District (former Neu-Sysdroy, Kr. Sensburg),[147] as well as a fitting of a shoulder belt for scabbard suspension (Latin: *balteus*) in the shape of an openwork round plate from Grave 305a in Babięta, Site I, Mrągowo District (former Babienten I, Kr. Sensburg).[148] It is also necessary to point out a published[149] but incorrectly defined hilt fitting of a Type Biborski D single-edged sword from Grave 16 in Âroslavskoe, Zelenogradsk District (former Schlakalken, Kr. Fischhausen) associated with the Dollkeim-Kovrovo Culture (Fig. 4.13:3).[150] Such fittings are known from swords towards the end of the Early Roman Period.[151] A sword scabbard was also deposited

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[138] Kontny and Mączyńska 2015, 248, with further reading.

[139] Miks 2007, 388, with further reading.

[140] Kontny and Mączyńska 2015, 249–50, with further reading.

[141] Kontny and Mączyńska 2015, 28.

[142] Kaczanowski 1992, 47–48.

[143] Miks 2007, 349–50.

[144] Miks 2007, 360–62.

[145] Kontny 2017c, 85–116.

[146] Kontny 2017c, 92 fig. 4:1.

[147] Kontny 2017c, 92 fig. 3.

[148] Kontny 2017c, 92–94 fig. 5.

[149] Jankuhn 1939, 253 fig. 9.

[150] Kontny 2017c, 94 fig. 4:3.

[151] Biborski 1978, 128; Kontny 2003c, 69.

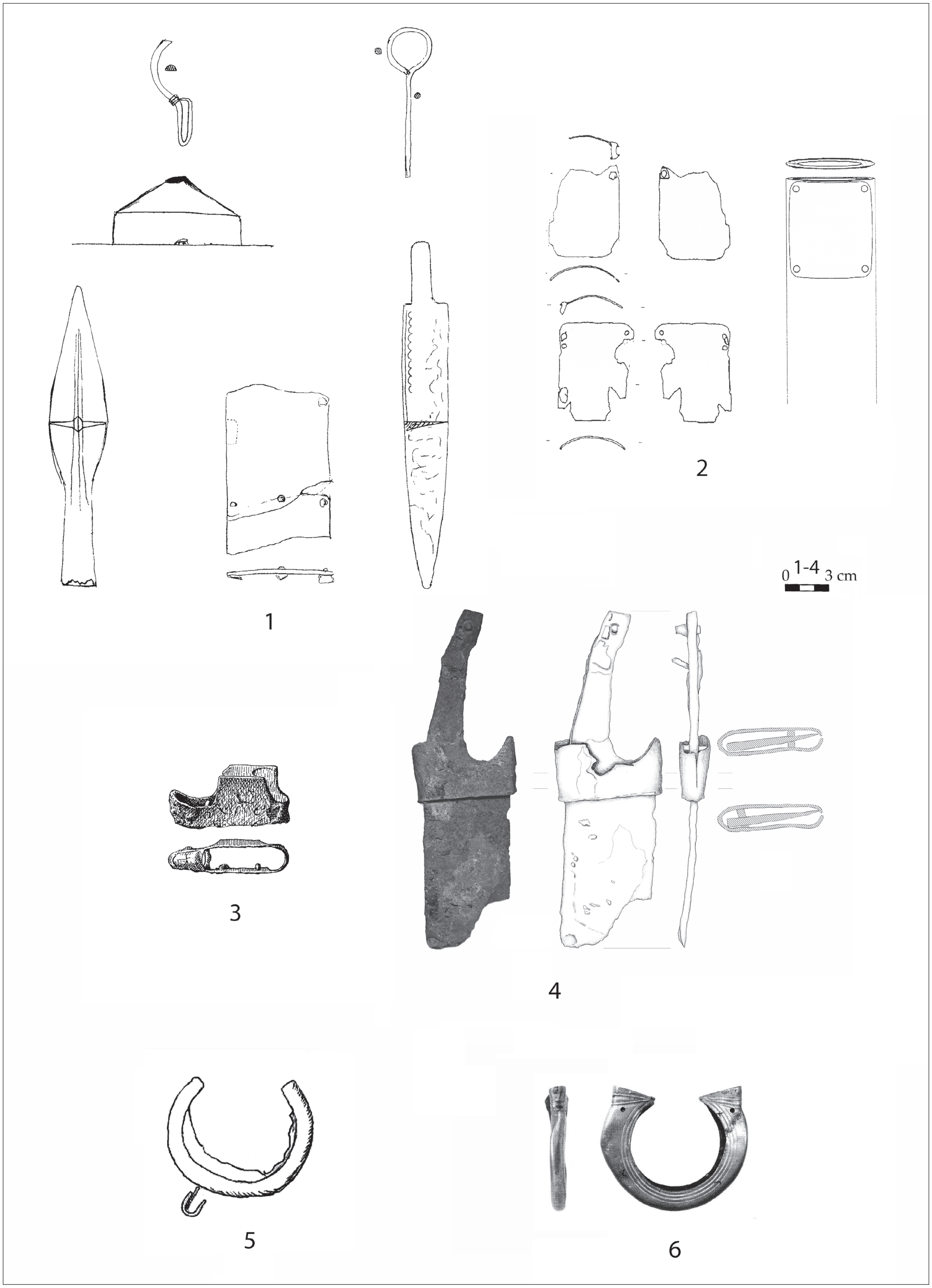

Figure 4.13. West Balt parts of sword hilts and scabbards with analogies. 1 – Onufryjewo, Grave 275 (Bogaczewo Culture), 2 – Cetula, Grave 2 (Przeworsk Culture), 3 – Âroslavskoe, Grave 16 (Dollkeim-Kovrovo Culture), 4 – Szurpiły, Site 4 (Sudovian Culture?), 5 – Kotel'nikovo, Grave 4 (Dollkeim-Kovrovo Culture), 6 – Thorsberg, offering site (1–5 – after Kontny 2017c, fig. 4; 6 – after Matešić 2015, pl. 33:M236).

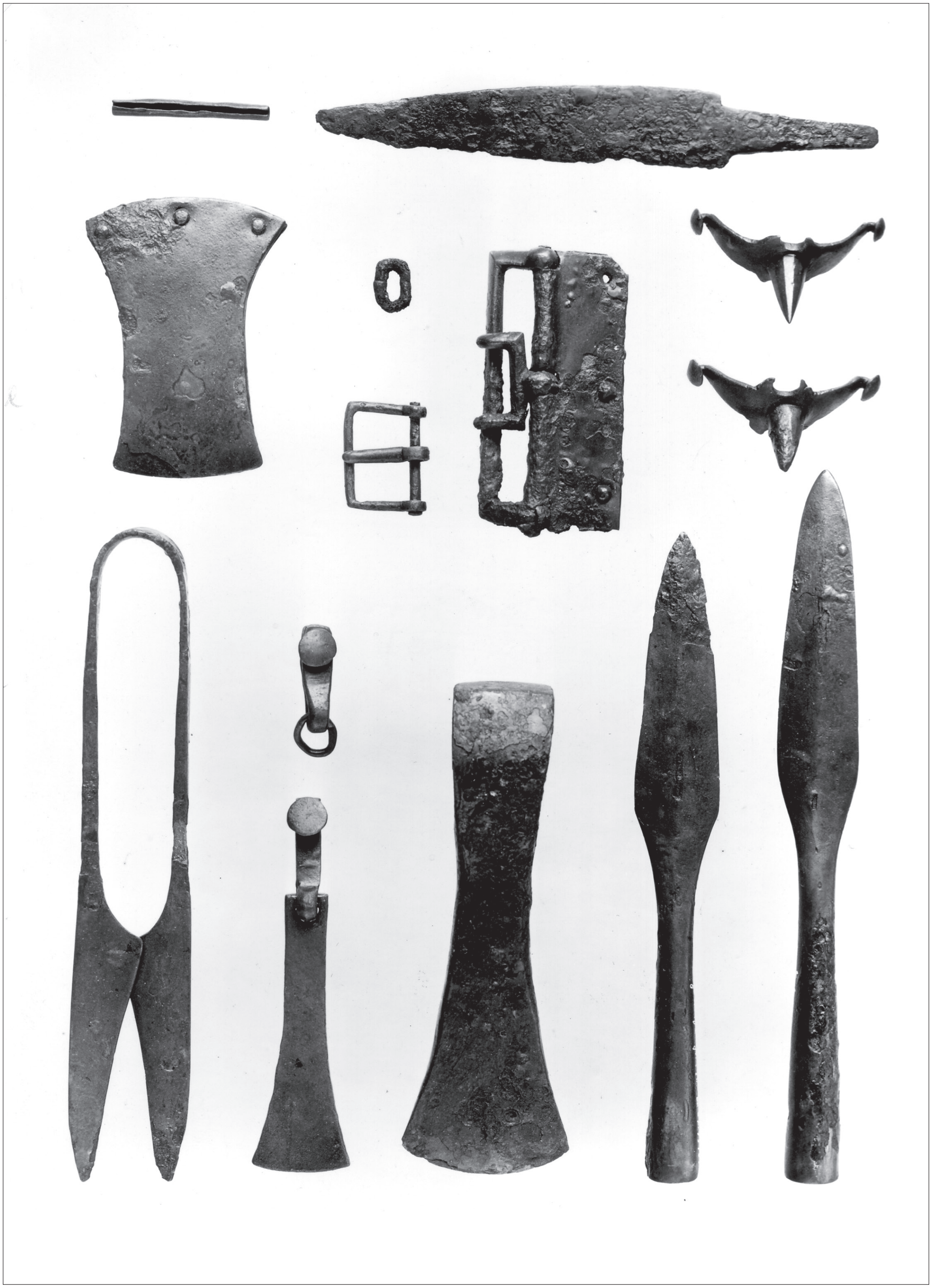

Figure 4.14. Example of a Bogaczewo Culture weapon grave furnishing with two buckles, including double tongue one – Dłużec, Site I, Grave 140 (Engel's heritage, after Grenz's heritage).

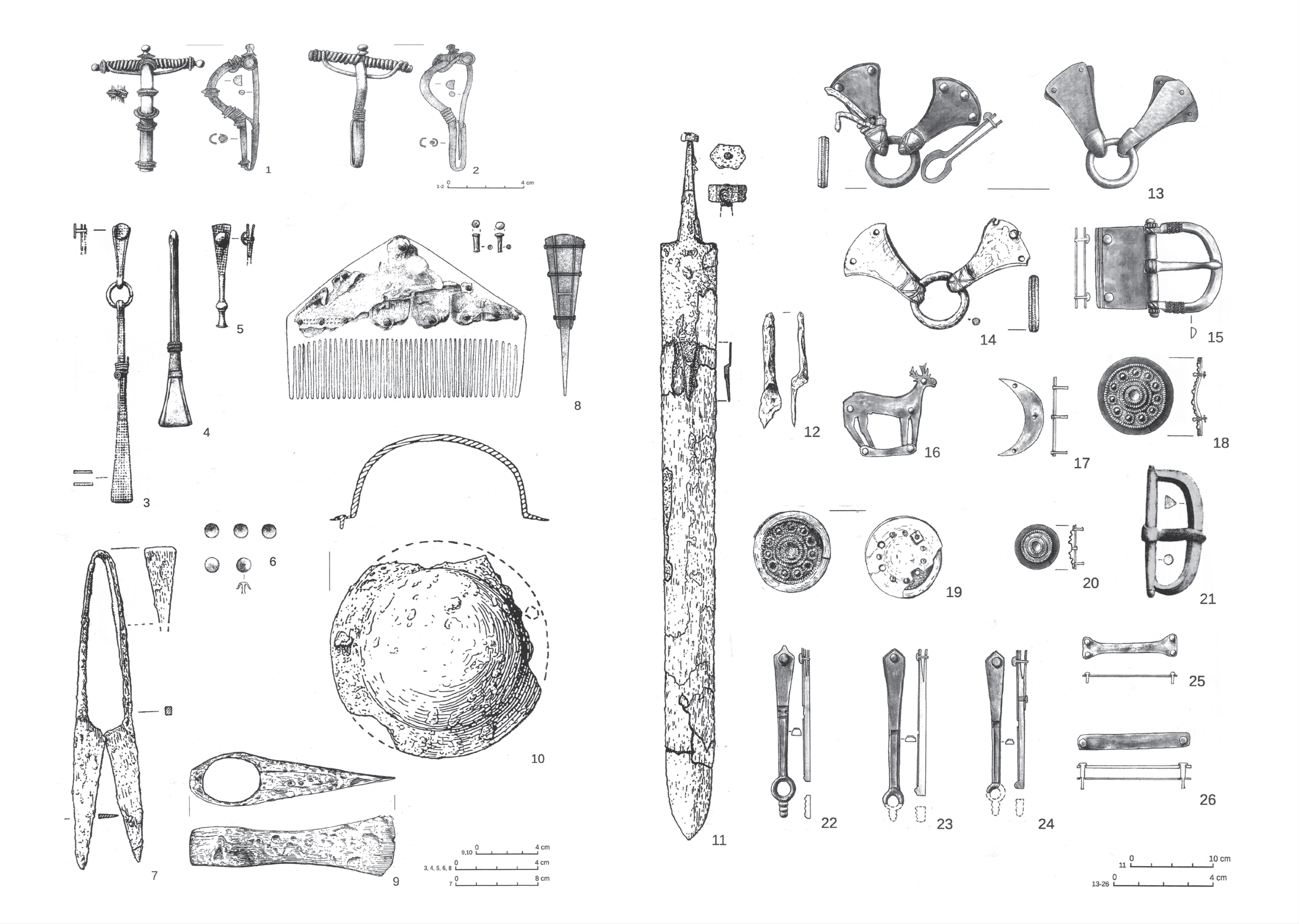

Figure 4.15. Furnishing of Grave 1 in Barrow 2 in Szwajcaria (after Jaskanis 2013, pls CXVIII–CXX).

into the grave, which is demonstrated by a fragment of a C-shaped clasp for joining scabbard laths. These artefacts were characteristic of such weapons. Yet another artefact from the Dollkeim-Kovrovo Culture is a Scandinavian type sword scabbard chape (Fig. 4.13:5) from Grave 4 in the locality of Kotel'nikovo, Zelenogradsk District (former Warengen, Kr. Fischhausen).[152]

In the Przeworsk Culture in Subphase B2b and at the beginning of the Younger Roman Period there are instances of the two buckles occurring in one grave. One is large with a rectangular frame and with a double tongue, while the other is smaller, rectangular or semicircular. The former is believed to be a fastener of a broad belt which marked a warrior's high status, and the other is thought to have been a fastener of a shoulder belt on which the scabbard with the sword (usually a valuable imported artefact) was suspended.[153] In the case of the Bogaczewo Culture, it is also possible to point out similar instances,[154] and the presence of buckles with double tongues was considered inspiration from the Przeworsk Culture warrior world.[155] In the Bogaczewo Culture, sets of such buckles are not accompanied by swords (Fig. 4.14). Bearing in mind the influences of the Przeworsk Culture warriors' equipment on Bogaczewo Culture military affairs, it seems very probable that Balt warriors who were buried in such graves also used swords. However, these were not deposited into graves, e.g. due to ritual or economic reasons (saving a valuable sword for successors of the deceased). Such examples can be pointed out mainly in the Bogaczewo

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[152] Peiser 1919b, 322; Jankuhn's heritage; Kontny 2017c, 94 fig. 4:5.

[153] Madyda-Legutko 1994, 551–58.

[154] Kontny 2017c, 97, 99 fig. 9 list 3.

[155] Nowakowski 1994b, 374. It has recently turned out that the popularity of such belt fasteners in the Balt milieu was much higher than assumed and exceeded the analogous phenomenon in the Przeworsk Culture, see Andrzejowski and Madyda-Legutko 2013.

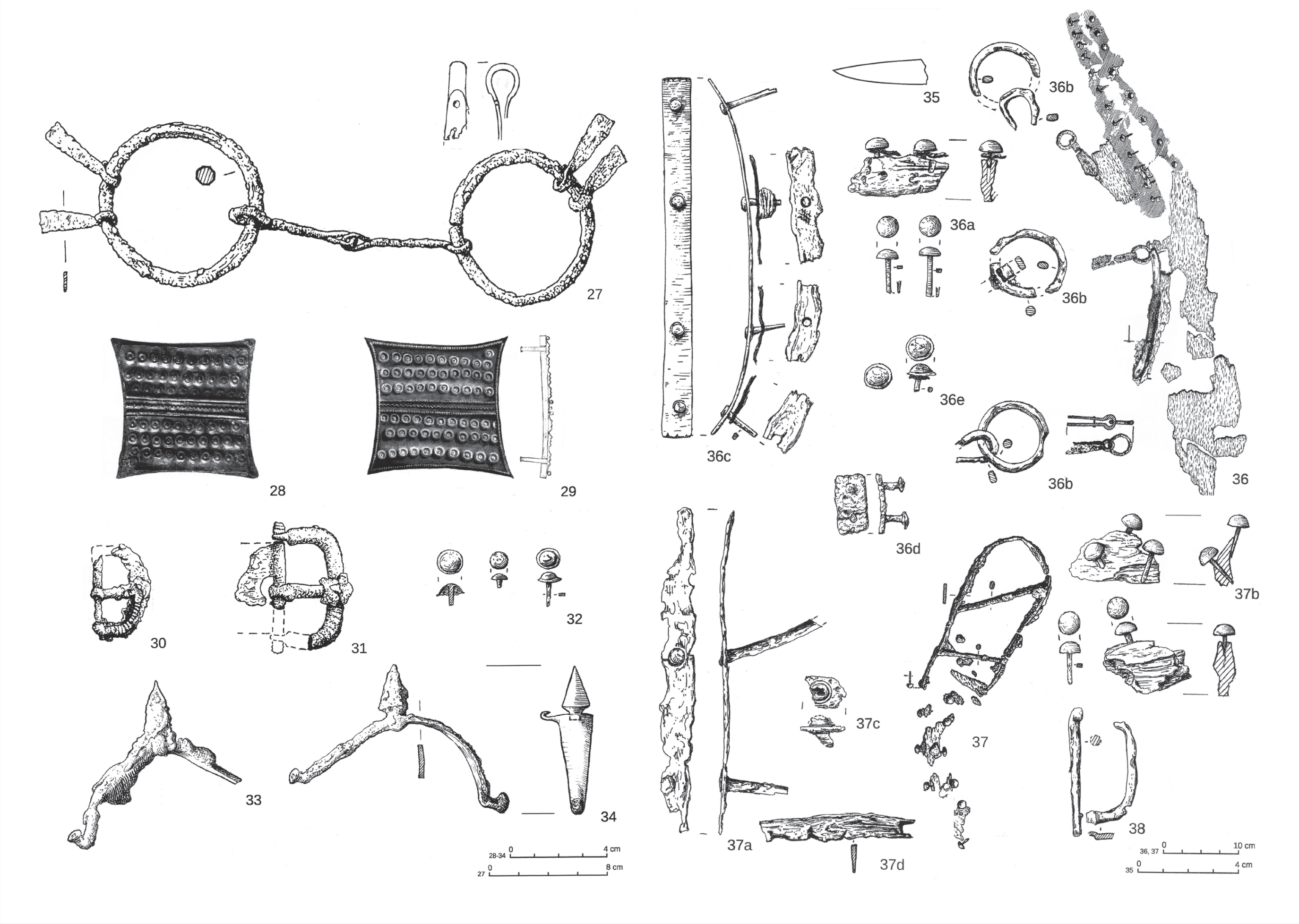

Figure 4.16. Furnishing of Grave 1 in Barrow 2 in Szwajcaria (after Jaskanis 2013, pls CXXI, CXXII).

Culture, while only one similar case is known from the Sudovian Culture.

Furthermore, sword finds from this culture are significantly less numerous. It is possible to mention only two double-edged swords from Szwajcaria, Suwałki District. The first one belongs to Type Folkeslunda-Zaspy, Subtype 1[156] and it was found in Grave 1 in Barrow 2 (Figs 4.11:6, 4.15:11). It was discovered together with, among other things, a scabbard and *balteus*. The other was ornamented with a lavish set of fittings of varying provenance (Fig. 4.15:16–20, 25–26). It can be assumed that these artefacts are 'souvenirs' from military expeditions. A cultural syncretism can also be seen in other furnishings of this unusually rich grave, implying that the warrior interred there participated in numerous military expeditions in Subphase C1b, including raids to Scandinavia.[157] The other sword — from Grave 2 in Barrow 25 — also seems to imply Scandinavian connections. This is a Roman weapon of Type Ejsbøl-Sarry[158] (a Roman shoulder belt knob with polychrome enamel was also found there), which occurs almost exclusively in Scandinavia. It found its way there towards the end of the Roman Period or at the beginning of the Migration Period.[159] On the other hand, a large fragment of a Biborski D type single-edged sword from the 'Targowisko' settlement in Szurpiły, Suwałki District (Fig. 4.13:4)[160] is to be dated to a period that slightly precedes the origin of the Sudovian Culture. In the light of this, it should be removed from the list of edged weapons of this cultural unit. Therefore, it seems that swords were of lower significance in the Sudovian Culture in comparison with the Bogaczewo Culture.

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[156] Biborski and Ilkjær 2006.

[157] Kontny 2013a, 132–40.

[158] Biborski and Ilkjær 2006.

[159] Kontny 2017c, 101–02, with further reading.

[160] Sawicka 2007.

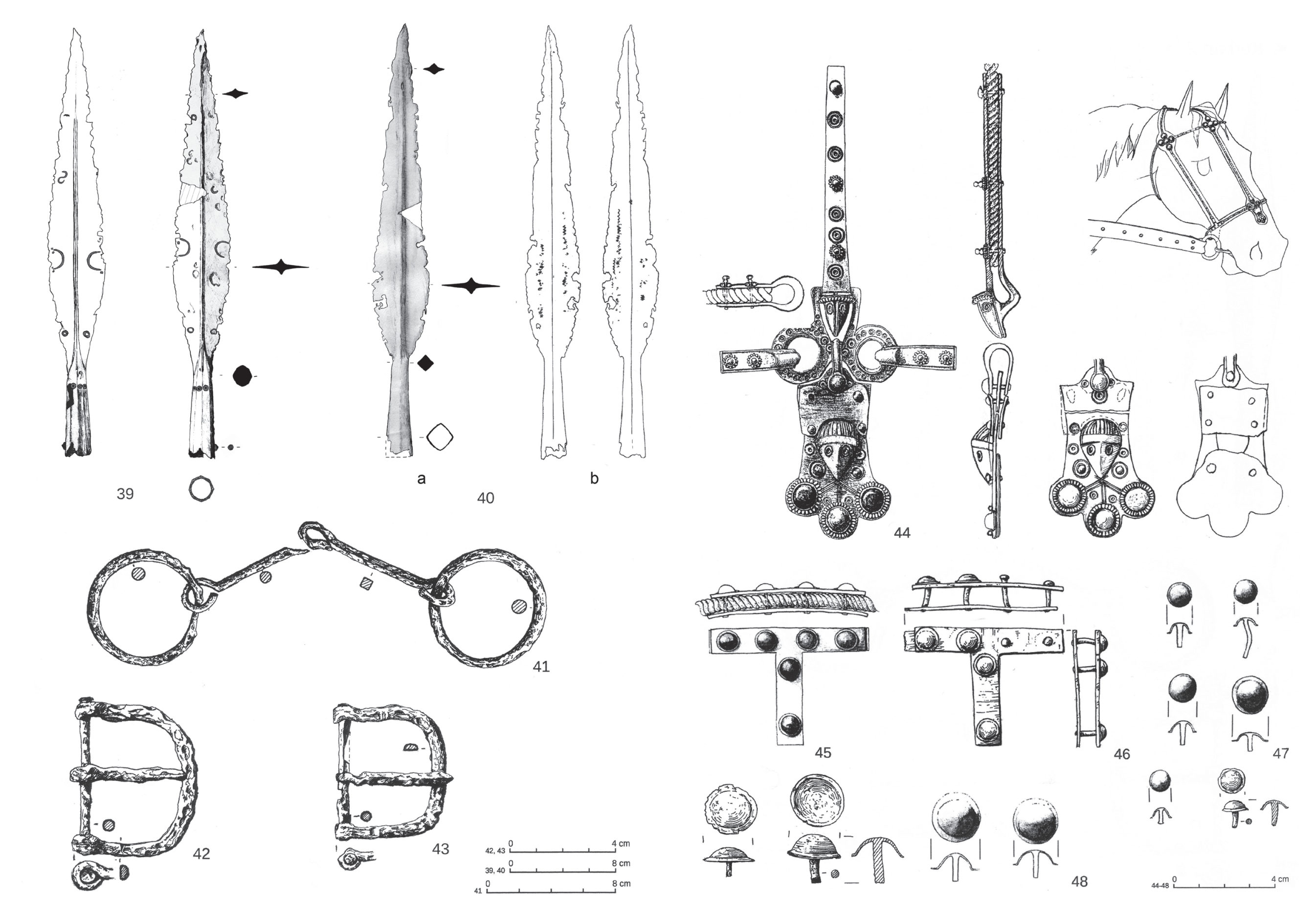

Figure 4.17. Furnishing of Grave 1 in Barrow 2 in Szwajcaria (after Jaskanis 2013, pls CCXXIII, CXXIV and Kontny 2016d, fig. 5).

Combat Knives

It has been assumed that combat knives are those with a total length of 25–40 cm.[161] However, no researcher has proposed precise criteria for the identification of such weapons. Some scholars have claimed that even 20 cm long knives should be seen as combat weapons, and this can apply to artefacts that are 15–20 cm long in cases where they were found in assemblages with weapons and belt parts. It has been suggested that in the case of ornamented weapons this limit should be lowered to a dozen centimetres or so.[162] This, however, seems rather bizarre, bearing in mind that decorations do not improve the offensive qualities of the artefact. What is more, knives of considerable size (total length exceeding 30 cm), are extremely rare in graves with weaponry (Fig. 4.19:6).[163] Therefore, even if one accepts a military use of such artefacts, their putative combat role has been greatly exaggerated.

In my opinion, however, finds that are discovered in grave furnishings in the Bogaczewo Culture and the Sudovian Culture were multifunctional tools. These were of use in warriors' daily life, e.g. for processing organic materials, for food portioning, and the like. The case of perfectly equipped Scandinavian warriors in the Younger Roman Period is similar. Their equipment encompassed swords, shields, spears, and javelins, sometimes bows and axes, as well as knives that were attached to the belt together with fire-striking kits. Such knives were sometimes even 40 cm long, although in

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[161] Nowakowski 1994a, 386.

[162] Karczewski 1999, 103–05, with further reading.

[163] I can mention only one artefact from the Bogaczewo Culture, which is 33.6 cm long (Wyszembork, Mrągowo District, Site IVa, Grave 61, see Szymański 2005, 67, 70–71 pl. XXIV; Kontny 2008d, 99 fig. 10:a), and one from the Sudovian Culture, which is 40 cm long (Szurpiły, Suwałki District, Barrow XII, central grave, see Żurowski 1961, 71–73 pls XVIII, XIX:1–22).

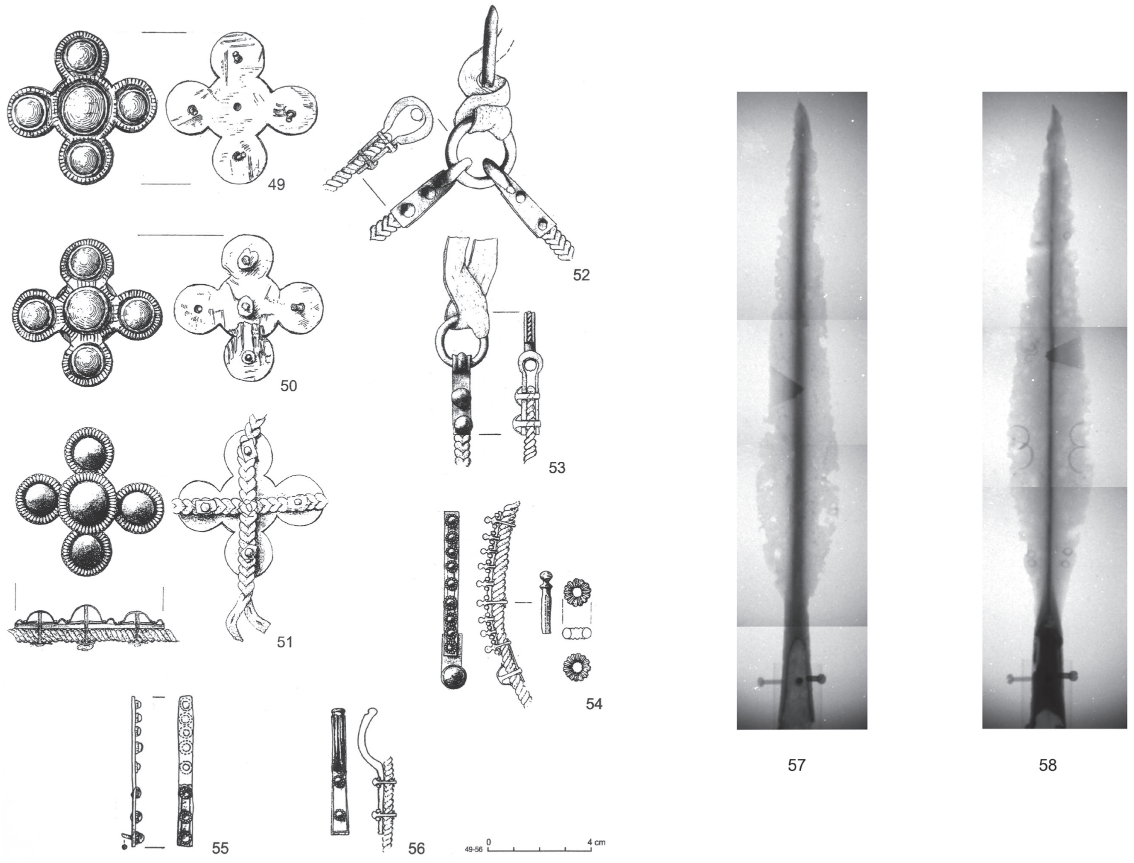

Figure 4.18. Furnishing of Grave 1 in Barrow 2 in Szwajcaria (after Jaskanis 2013, pl. CXXV and Kontny 2016d, fig. 6).

most cases they were much shorter.[164] I believe that none of these can be unambiguously classified as a combat knife. This is because the warrior's equipment required the use of both hands and left no room for using such a knife, apart from in a situation where all other offensive weapons were lost.[165] Other possibilities would be fighting at extremely close quarters where it was impossible to use another weapon, or using a knife in order to finish off a fallen enemy. However, if one assumes that such last-ditch weapons were weapons in a strict sense, it would be necessary to be consistent and speak of combat awls, needle-shaped strike-a-lights, razors, or scissors, as it is also possible to do harm with such items.

A Roman *pugio* dagger, found in former Ilischken, Kr. Wehlau (near the present-day village of Divnoe, Gvardejsk District) in the territory of the Dollkeim-Kovrovo Culture (Fig. 4.20), cannot be classified as a weapon, either. This artefact was deposited into the grave in the Early Roman Period. Considering its ornamentation (its hilt, cross-guard, and scabbard were inlaid with silver), it was in all probability a marker of its owners' high social status; perhaps it is a diplomatic gift.[166] *Pugiones* could have been used in combat, as their potential for thrusting is obvious, especially while performing a twisting motion while withdrawing the weapon from the wound. On the other hand, their effectiveness in combat was limited, as their short cross-guards offered no protection for the hand and their metal hilts did not absorb sweat. Thus, they quickly became slippery and they could also hurt the skin. It seems, therefore, that the *pugio* was used

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[164] See Ilkjær 1993, 260–62 pls 182–227.

[165] Similar conclusions were drawn by Tomasz Bochnak, who discussed long knives in the Przeworsk Culture in the Late Pre-Roman Period — Bochnak 2003, 5–18.

[166] Chilińska-Früboes and Kontny 2018.

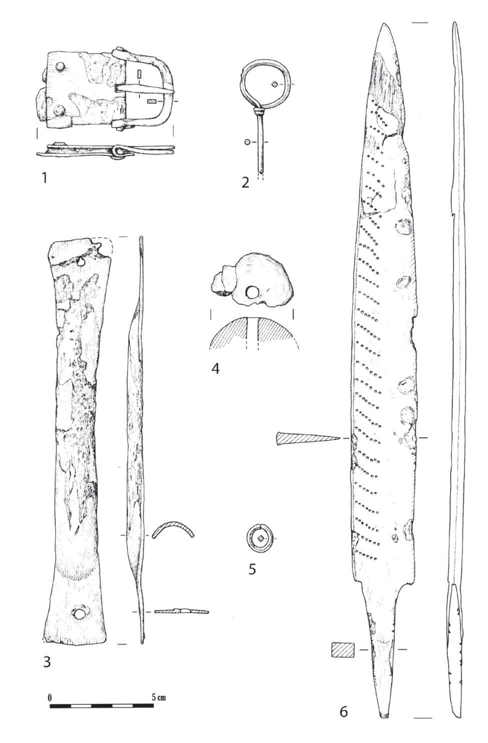

Figure 4.19. Long knife in the furnishing of Grave 61 in the Bogaczewo Culture necropolis at Wyszembork, Site IVa (after Szymański 2005, pl. XXIV).

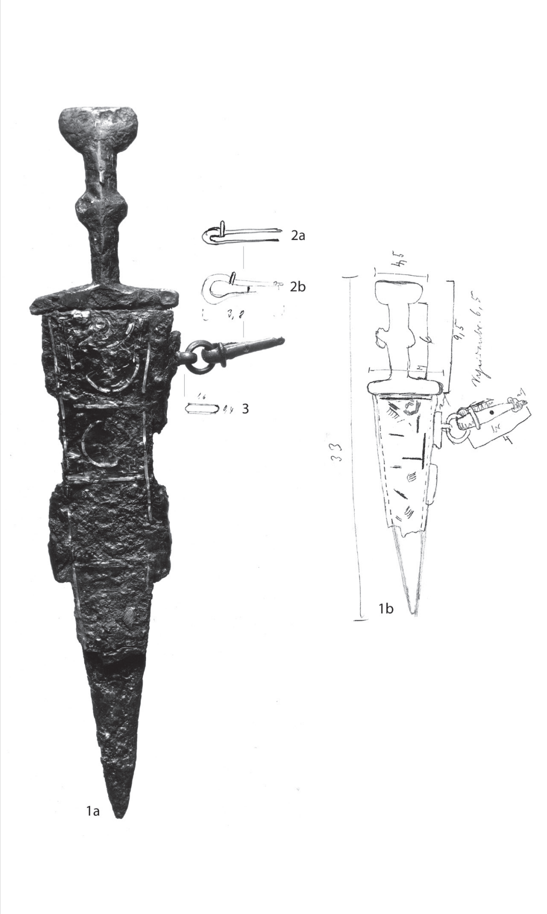

Figure 4.20. Roman *pugio* dagger with its sheath, found in former Ilischken in the Dollkeim-Kovrovo Culture (after Chilińska-Früboes and Kontny 2018, fig. 4).

as a weapon in emergency cases (when the sword was lost) or to deliver a mortal thrust to a fallen adversary (analogously to the late medieval misericorde).[167] On the other hand, it is possible to exclude a proposal by Nowakowski that the *pugio* was more attractive for the Balts than the sword, due to their preference for short weapons.[168] Apart from a doubtful assumption that Balt people did not make use of longer edged weapons, there are also practical considerations that speak against such an opinion. Namely, in an engagement between a knife fighter and a swordsman the former's chances of success are minimal. What is more, such a valuable artefact of limited combat utility, but of high prestigious significance, was likely not used for fighting.

On the other hand, so-called knife-daggers (German: *Dolchmessern*) can be considered weapons, with special reference to longer examples. Discoveries of such artefacts are numerous in the Balt milieu, especially in the Dollkeim-Kovrovo Culture and in the West Lithuanian, Central Lithuanian, and Lower Neman Groups.[169] These finds were remarkable for their thickened backs, below which there were parallel grooves, but first of all for their long, narrow, and penetrative points. It can be assumed that such points were very suitable for thrusting. *Dolchmessern* first appear in the Early Migration Period[170] and it was from them that Late Migration Period edged weapons (Balt saxes) developed.[171]

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[167] Obmann 2000, 14–15; Bishop and Coulston 2006, 85; Saliola and Casprini 2012, 41–45.

[168] Cf. Nowakowski 2007b, 92.

[169] A prototype form of a knife-dagger is known from Barrow III in the Sudovian Culture necropolis in Netta, Augustów District (Fig. 4.52), see Bitner-Wróblewska 2007, 31–32 pl. LVIII:2; collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/364.

[170] See, e.g., Šimėnas 1996; Prassolow 2013b, 119, 123–24; 2018.

[171] Kontny 2013c.

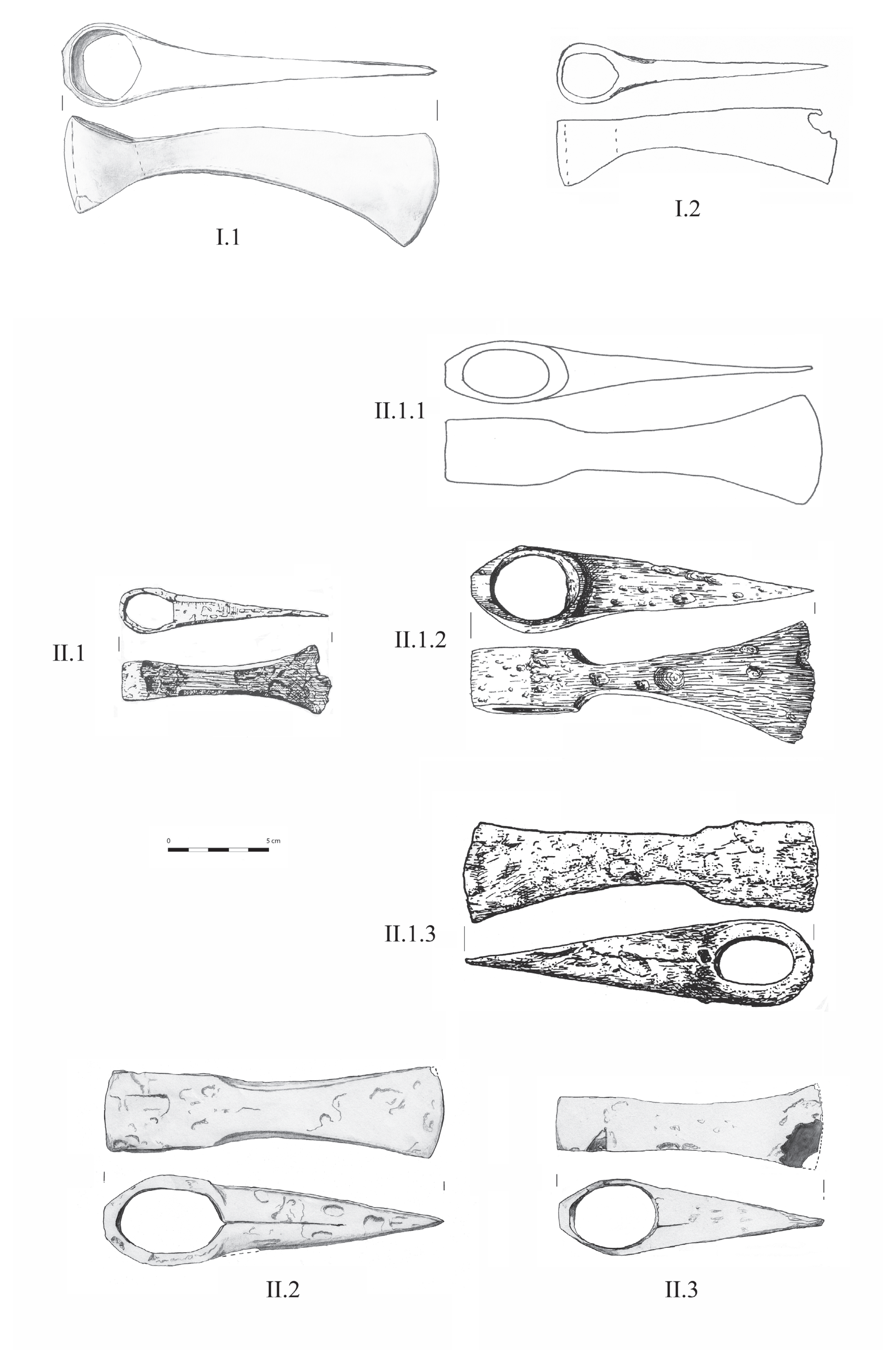
I.1
I.2
II.1.1
II.1
II.1.2
0
5 cm
II.1.3
II.2
II.3

Figure 4.21. Scheme of typology of Balt axes known from the current Polish lands dated to the Roman Period (after Kontny 2018a, fig. 1).

Blunt Weapons

Issues of the use of strike weapons made of organic materials have been dealt with above in the section devoted to swords.[172] Although it is not clear whether clubs were used at all in the Balt repertoire of weapons (and even if they were, their role was not significant), butt weapons with iron edges were its important component. Axes,[173] including socketed ones,[174] were among the most important and genuine kinds of offensive weapons in the Balt milieu.

It is possible to distinguish two groups of axes (Fig. 4.21):[175]

I — with asymmetric axe-heads which are bent down, of considerable size (14.4–18.7 cm in length) and weight; the haft was usually fixed at an acute angle, about 70–80° in relation to the axis of the axe-head; the horizontal cross-section of the neck was clearly narrower in relation to the butt, and its vertical cross-section was usually more pronounced in its bottom part;

II — forms with symmetric or slightly asymmetric heads; their length is more diversified than in the case of the first group and falls between 10.3 and 20 cm; butts are usually gently pronounced; they are rounded or slightly flattened only on the culmination of the arc; the horizontal cross-section of the eye smoothly transforms into the neck in a 'needle-like' manner; the cross-section of the eye itself is rectangular or of a similar shape.

Within Group I it is possible to isolate subgroups: **I.1**, which includes strongly asymmetric finds; **I.2** — axe-heads are less asymmetric, sometimes their upper edges are nearly straight, and they first go down in a more visible manner near the edge; **I.3** — of stocky proportions, with a developed butt (this subgroup encompasses only one artefact, so it may turn out to be temporary).

As regards Group II, the following subgroups were isolated: **II.1** — axe-heads with elongated proportions, slender and oval eyes which are smoothly distinct (or not distinct at all) from the necks (in the vertical cross-section); their butts are rounded and their edges are fan-shaped; the edges are usually wider than the butt/eye's height (only Variant **II.1.1**'s eyes are clearly distinct from the necks, and butts are flattened; Variant **II.1.2** stands out with wide and fan-shaped edges; **II.1.3** — axe-heads are asymmetric and the morphology of the eye is atypical, i.e. the eyes are higher in their butt part); **II.2** — finds with stocky eyes which are oval in cross-section (diameters of the oval are more even than in the case of Subgroup II.1); the eyes are clearly distinct from the necks on both sides, although often in an arcuate manner; sometimes the axe-heads are remarkably profiled (their cross-sections are rectangular with chamfered corners), their butts are occasionally flattened in the culmination of the arc, and their edges are less arcuate than in Subgroup II.1; **II.3** — transitional forms, of stocky proportions (a trait of Subgroup II.2), with indistinct butts (a trait of Subgroup II.1).

Axes of Group I were in use in the Early Roman Period, with the possible exception of Subgroup I.3, as in this case there are no grounds for reliable dating. They were recorded in the central and especially in the northern part of the territory of the Bogaczewo Culture. They are also known from the Dollkeim-Kovrovo Culture and from the Lithuanian-Latvian Barrow Culture (as Type Malonaitis 5).[176] In the latter culture, they last until the Younger Roman Period, and they may represent a point of departure for the development of new forms which appear until the Early Medieval Period. It seems that the earliest asymmetric axes were manufactured in the Bogaczewo Culture and from there they spread to the north and the north-east. They may have been popular in remote areas of the eastern European forest zone. It is possible that they influenced the origin of surprisingly similar forms of Type 2B (2Б) in the classification of Ahmedov and Voroncov. These are known in the period between the mid-third and early fourth centuries in the Culture of Riazan-Oka Finns on the upper and middle Oka River.[177]

Artefacts classified as Group II were popular not only in the Bogaczewo (Subgroup II.1: in Phases B2–C2, II.2: B2–C1a, II.3: B2/C1–C1a) and Sudovian Cultures[178] (Phases C1–C2),[179] but also in the Dollkeim-Kovrovo Culture. In the latter, their context of occurrence allows the extension of their chronology to Phases C2–C3.

In some cases axe-heads were decorated, though the ornament was limited to arrangements of dashes or lines placed on the narrowing near the eye or on the butt. Decorations were found in both groups of axes.

Regrettably, the dimensions of axe hafts are unknown. These can be estimated solely on the basis of analogies, first of all: surviving axe hafts from north European bog

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[172] For a full discussion see Kontny 2015b.

[173] Kontny 2018a.

[174] Kontny 2016c.

[175] These were first isolated by Nowakowski 1995, 36–37.

[176] Malonaitis 2008.

[177] Ahmedov and Voroncov 2012, 12 fig. 3.

[178] In this case, artefacts are somewhat smaller — their lengths are between 10.5 and 17.5 cm and their butts are less distinct.

[179] On the basis of this chronological framework it can be supposed that in Phase C2 such artefacts were also in use in the Bogaczewo Culture. However, as funeral rites changed, that is, weapons were excluded from grave gifts, these have not been recorded there until now.

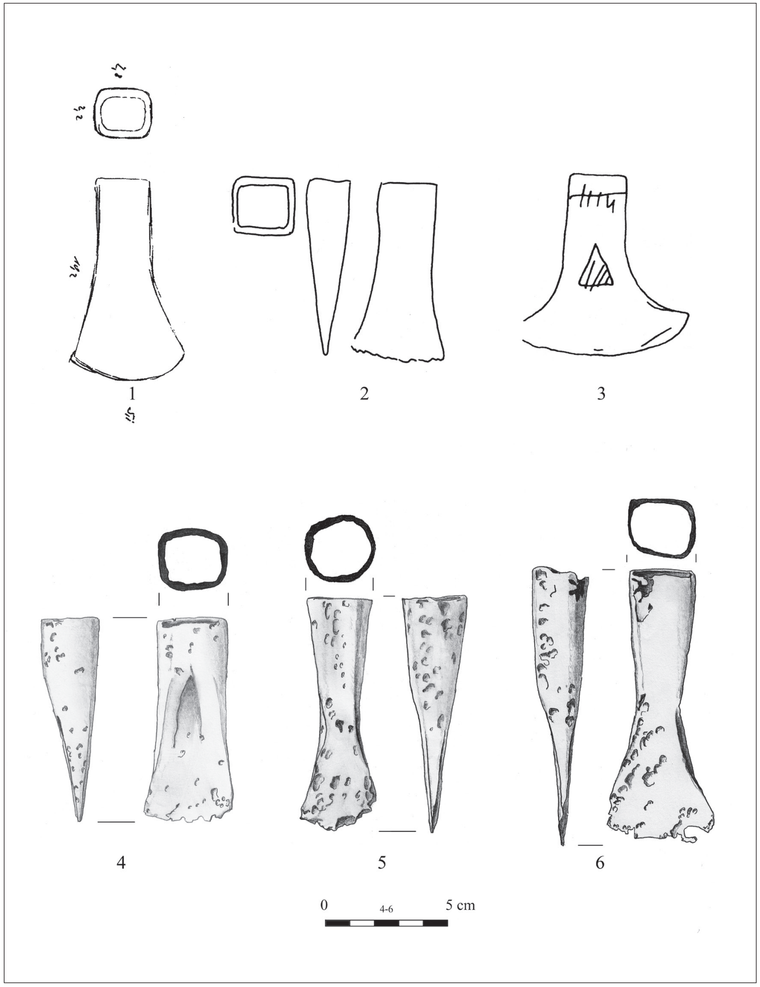

Figure 4.22. Adzes from the sites of Bogaczewo (1–3) and Sudovian (4–6) Cultures. 1 — Koczek II, Grave 109; 2 — Leśniewo, Grave 18/8; 3 — Tałty, Feature 79; 4 — Szwajcaria, flat Grave S.35; 5 — Szwajcaria, Barrow LXI, Grave 2; 6 — Szwajcaria, Barrow XLVII, Grave 2 (after Kontny 2016c, fig. 2 with further reading).

deposits. Thanks to these, it is possible to speculate that the total length of these weapons falls usually between 60 and 90 cm. Thus, its reach was similar to that of swords. This implies that the axe was a substitute for the sword, the more so that axe-heads (especially of Group II) were often found in grave inventories with other weapons. This does not exclude other applications of the discussed butt weapons. On the basis of ethnographic analogies, it can be proposed that these were multifunctional tools; however, their military role was significant, perhaps even preponderant.[180]

A further kind of Balt butt weapons are socketed axes (Figs 4.23–4.24). These were mainly 10–16 cm in length. Their sockets were circular in cross-section and their diameters were between 2.3–4.4 cm. All fastenings were made by means of pressing and the use of a transverse rivet or nail was found in no case. Sockets were finished in a careful manner, and sometimes only a vertical seam can be seen, which came into existence when the eye was formed. Sockets of uneven depths usually reached as far as the base of the blade. Their bottom parts narrowed in a wedge-like manner or were flat. Cutting edges were symmetric both in the vertical and the horizontal plane.[181]

Allegedly, it is difficult to distinguish between axes and adzes. The latter were used as wood processing tools and were also popular in the Balt milieu. However, in the West Balt Circle they stand out with a clear flattening on one side (the cutting edge is pronounced one-sidedly), and an arch-shaped bend of the working part (with the central part outwards). Furthermore, the cross-section of the socket is often square-shaped (such fastening prevents incidental twisting in the course of work); the socket itself is not fully forged or even not closed in the bottom part (thus, the tool seems to have been carelessly made). Eventually, the size of the artefact is rather small. It is less than 10 cm in length; however, this solely applies to the Balt milieu and not to the entire *Barbaricum* (Fig. 4.22).[182]

Socketed axes were in use in the West Balt milieu in the Roman Period, the Migration Period, and in the Early Middle Ages. Their direct prototypes were iron artefacts from the West Balt Barrow Culture of the Early Iron Age. This is demonstrated by morphological similarities, i.e. a remarkable thickening in the central part of the socket and a narrowing of the cutting edge which separated the working part. These traits can be seen in earlier finds from the Bogaczewo Culture.

Bogaczewo Culture socketed axes were 10–14 cm long and their socket diameters were 3.5–4.4 cm. Three basic types can be distinguished (Fig. 4.23):

I — with massive sockets, clearly thickened in the central part, and with a narrowing between the socket and the cutting edge; the blade widens in a fan-shaped manner;
II — with sockets that evenly narrow toward the bottom; thanks to this, the edge part is well pronounced (the entire artefact is hourglass-shaped);
III — with parallel or almost parallel side walls of the socket and with the edge that is smoothly distinct from the socket.

Sizes of Sudovian Culture artefacts (Fig. 4.24) are more varied. Apart from small ones (10–14 cm), there are also larger examples the length of which reach

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[180] Kontny 2018a.

[181] The latter trait does not apply to many later forms which are testified to in Lithuania, cf. Malonaitis 2008, fig. 48.

[182] Kontny 2016c, 315–16.

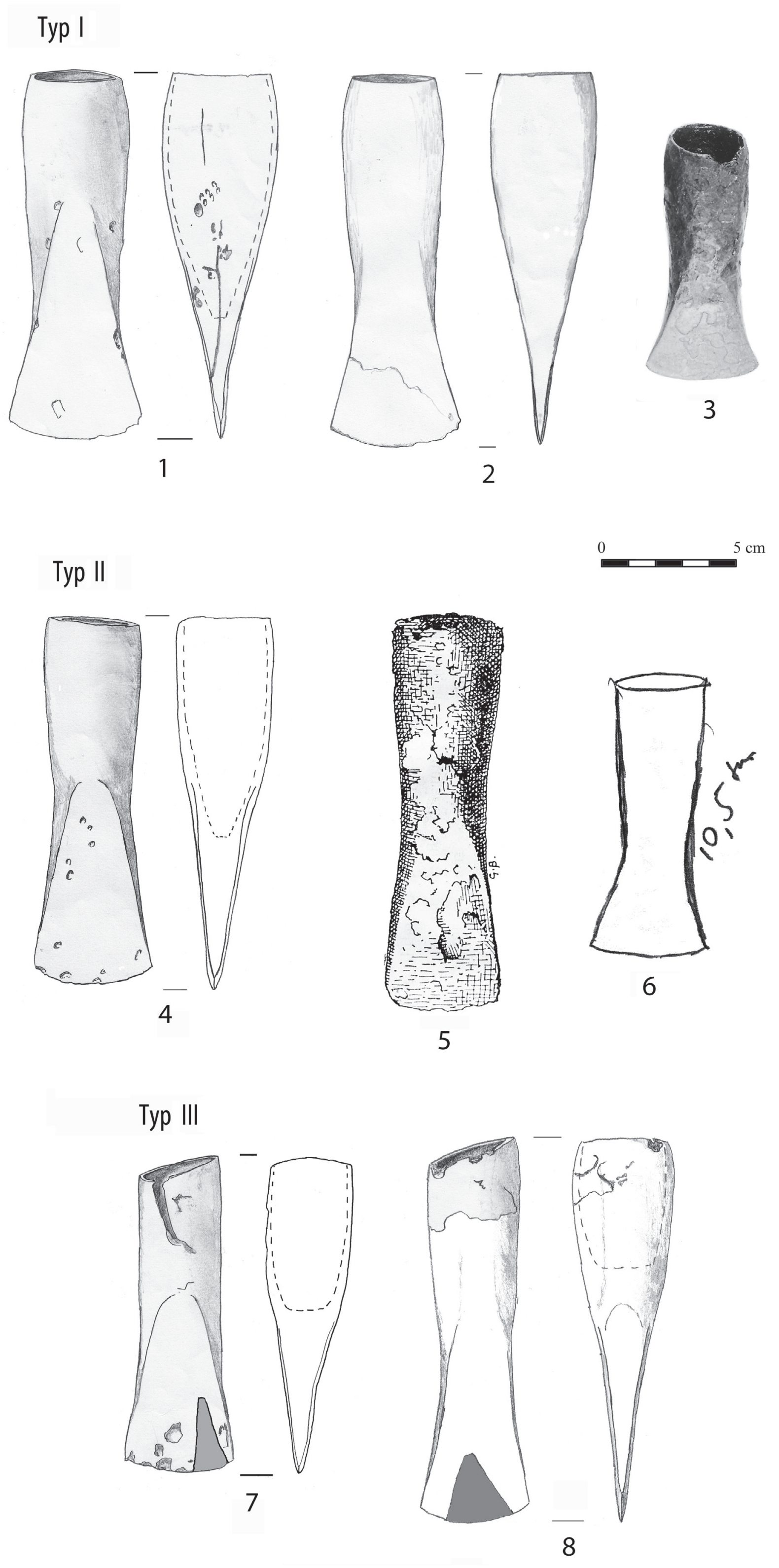
Typ I
1
2
3
0
5 cm
Typ II
4
5
6
10,5 cm
Typ III
7
8

Figure 4.23. Socketed axes of the Bogaczewo Culture. 1–2, 4 — Judziki, stray finds; 3 — Romoty, Grave 70; 5 — Radužnoe, Grave VI; 6 — Kosewo, Site I, Grave 292; 7 — Bargłów Dworny, stray find; 8 — Judziki, Grave 7 (after Kontny 2017b, fig. 8).

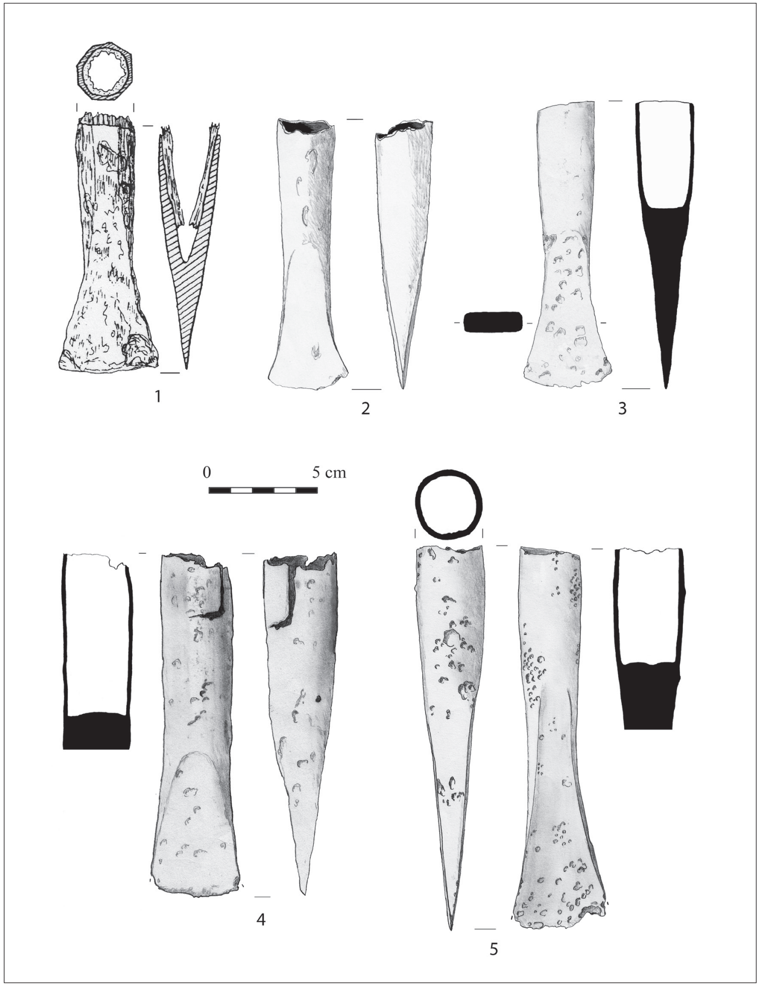

Figure 4.24. Socketed axes of the Sudovian Culture. 1 — Netta, Grave 12; 2 — Żywa Woda, Barrow 7; 3 — Szwajcaria, flat Grave S.12; 4 — Szwajcaria, Barrow LXXII, Grave 2; 5 — Szwajcaria, Barrow 40 (after Kontny 2016c, fig. 7).

up to 17.5 cm. So far, there are no finds that could be classified as Type I. In the Sudovian Culture there are socketed axes that are more slender and whose socket diameters are smaller (2.3–3.6 cm). This is not necessarily a result of cultural differences. Instead, this can be due to chronological issues (Sudovian Culture finds are later), or to a different manner of fastening, e.g. with the use of more durable wood species in the manufacture of hafts, where such a massive ending as in the case of weaker wood species was not necessary. Furthermore, wedges or leather thongs may have been used in order to secure tighter fastening, which directly influenced the thickness of the socket.

Bogaczewo Culture socketed axes occurred in the period between Phase B1 and B2/C1. On the basis of available data it is not possible to be certain of the chronology of individual types. However, it can be supposed that Type I, which demonstrates archaic traits (such as thickening of the socket, which is known as early as the West Balt Barrow Culture), is probably earlier. Finds from the territory of the Sudovian Culture can be dated in the following way: Type II artefacts were evidenced in Phase C1(a), while transitional II/III forms and Type III finds occurred between Phases B2/C1 and C1b–C2. An unusual, slightly asymmetric artefact of Type Malonaitis 2 from Barrow 40 in Szwajcaria should be dated to Subphase C1a.

The manner of axe hafting can be inferred on the basis of iconography (with special reference to depictions from the territory of the Hallstatt Culture) and surviving hafts discovered in the Danish bog sites from the Pre-Roman and Roman Periods. In all probability, hafts that were bent in a knee-like manner were in use. Such hafts were either unipartite or bipartite.[183] The find context of northern European artefacts does not necessarily imply military use. What should be taken into consideration are works related to felling trees for fire, camp preparations, boatbuilding, or other applications.

On the other hand, in the West Balt milieu socketed axes in all probability fulfilled an analogous role to axes. Apart from utilitarian and metrical traits, this is also implied by their similar weight (0.25–0.5 kg): a considerable burden, but allowing for military applications, that is rendering high mobility and rapidity of use possible. In the case of higher weights, inertia would decrease military effectiveness, which called for immediate reactions. What is more, the number of socketed axes and axes in both discussed cultures is similar, and in no case were both artefacts found in one assemblage. This implies that the two kinds of artefact were considered interchangeable.

Finds from inhumation graves also shed light on the purpose of socketed axes. Assuming that longer parts of hafts were usually placed along the axis of the dead, it can be concluded that axe-heads were fastened at an angle of 70–80° (precisely as in the case of axes), which additionally implies an identical function. Cutting edges of socketed axes were found in the vertical position, not in a horizontal one, the latter being proper for adzes. Of special interest is the case of Grave 312 in the necropolis of the Central Lithuanian Group in Marvelė, Kaunas District, where the socketed axe's cutting edge was immediately next to the fittings of a shoulder-type belt. The belt was taken off and placed above the head of the deceased (Fig. 4.25:1).[184] Such belts are often found in graves with shafted weapons and with dagger-knives (as in half of fourteen cases

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[183] Bipartite examples are known from Vimose — cf. Christensen 2005, 62–63 figs 11–12 and Hjortspring — cf. Kaul 2003c, 155 fig. 4:11.

[184] Bertašius 2005, 79–80 pl. CXL.

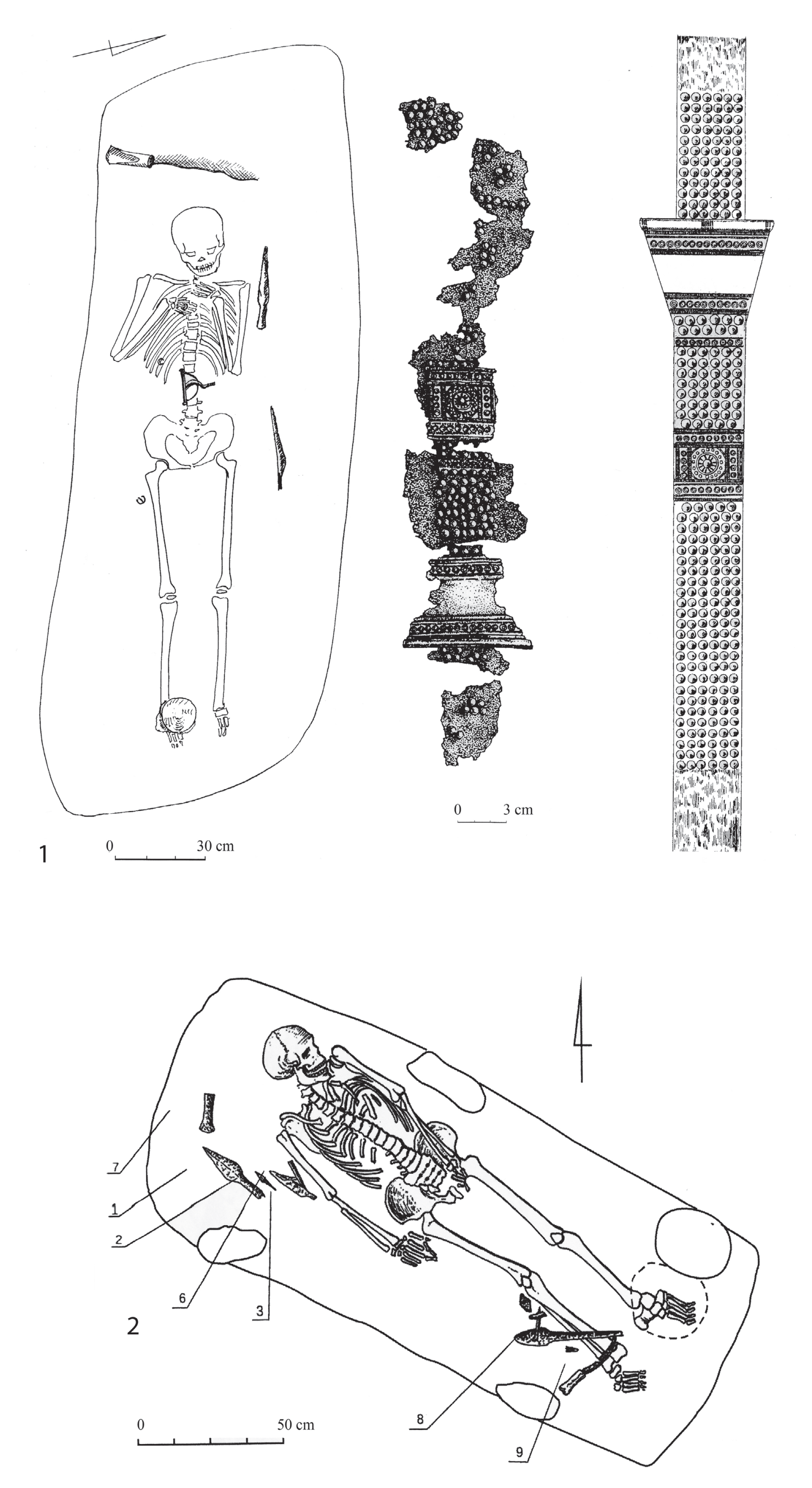
1
0 30 cm
0 3 cm
2
7
1
2
6
3
8
9
0 50 cm

Figure 4.25. Position of socketed axes in Balt inhumation graves: 1 — Marvelė, Grave 312; 2 — Szwajcaria, flat Grave S.12 (after Kontny 2016c, fig. 10).

from Lithuania). What is even more evident is their correlation with socketed axes.[185] Therefore, it seems probable that belts of this kind were used for suspending weapons, including socketed axes. This strongly implies the military use of the latter.

Yet another example is known from the Sudovian Culture necropolis in Szwajcaria, the flat Grave S.12 (Fig. 4.25:2).[186] Grave gifts were deposited in two clusters: household tools (an auger and a folding sickle) near the right leg of the deceased who lay in the supine position, while weapons (a shafted weapon head and a putative arrowhead) and artefacts carried on the warrior's belt (a knife and a rod-like fire striker) were placed near the right arm. Among weaponry and other warrior's attributes there was a socketed axe, which implies its connection with the military sphere and not with household use.

On the other hand, in the West Balt milieu it is possible to demonstrate a few differences concerning the context for the occurrence of socketed axes in graves. While in the Bogaczewo and Sudovian Cultures such artefacts were almost exclusively found in graves with weapons, in the Dollkeim-Kovrovo Culture they were relatively often accompanied by carpenter's tools. Klaus Raddatz paid attention to the exceptional significance of woodworking tools in Sambian-Natangian territories and compared the role of local carpenters to the high social position of Celtic blacksmiths. This was believed to manifest a peculiar *Holzkultur*.[187] Such circumstances render the interpretation of finds from Sambia, Natangia, and Nadrovia a bit less unambiguous, but discoveries from other territories of the West Balt milieu clearly imply that one is dealing with weapons. This obviously does not exclude other applications, as in the case of axes.[188]

Protective Armament

This category of find is represented almost exclusively by shield parts,[189] among which shield bosses prevail. Shield grips are known, too, but their relatively low number suggests that organic grips were mainly in use. At the same time, it is striking that grips with no accompanying shield bosses very often occur in grave assemblages (twelve well-documented cases). Instances of co-occurrence of a shield boss and grip were almost equally numerous (eleven cases). This phenomenon takes place in various phases. Together with occurrences of nails or rivets that fastened the shield boss without shield mounts, this implies that shields with organic shield bosses played a significant role. Such an assumption has already been evocated in literature, and it received support from the fact that shield bosses with short and blunt spikes were popular in the Balt milieu. These were related to wood-made artefacts, which are present in archaeological record.[190]

Shield Bosses

Shapes of shield bosses imitate central European patterns (Figs 4.26–4.27, 4.28:1, 4.29:2–3); however, the chronology of some forms is clearly different: it is longer than that of their prototypes. Namely, Jahn 5 shield bosses (Figs 4.26:2–3, 29:2–3)[191] were in use not only in Phase B1, but until the beginning of the Younger Roman Period. Jahn 6 Type finds (which are related to Subphase B1c in the Przeworsk Culture)[192] occurred until Subphase C1a (Fig. 4.26:4); meanwhile Type Jahn 7b artefacts with sharp spikes (Fig. 4.26:5–6), which are typical of Subphase B2a, were in use in the Bogaczewo Culture in the entire Phase B2, and perhaps even bit longer.[193] In the case of Type Jahn 7a it is possible to isolate a number of variants, including those which are unknown or are very poorly represented in the Przeworsk Culture (Fig. 4.27).

1. Finds that were classified as Przeworsk Culture Variant 1 according to Teresa Liana[194] (Fig. 4.27:1). Their spikes are clearly distinct from the cone and the cone itself is relatively high. The use of rivets with quadrilateral heads can be considered a secondary trait. Such shield bosses are known from Phases B2/C1–C1a.
2. Shield bosses that were included into Variant 2 by Liana (Fig. 4.27:2). Their apexes are smoothly distinct in an arcuate manner; at the moment there are no grounds to precisely define their chronology.
3. Shield bosses with clearly distinct but short spikes. They are of stubby proportions (Fig. 4.27:3), with low cones and walls; chronology: B2b–C1a.
4. Shield bosses with spikes which slightly narrow toward blunt ends. Some of these are provided with relatively narrow apexes (Fig. 4.27:4) resembling the ones characteristic of Type Jahn 7b; chronology: as above.
5. Shield bosses with proportions that are characteristic of Variant 1; however, their apexes are very short

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[185] Prassolow 2013a, 103.

[186] Antoniewicz 1962, 205–23; Jaskanis 2013, 69 pls CIII–CIV.

[187] Raddatz 1993, 174–79.

[188] For a comprehensive discussion see Kontny 2016c.

[189] For a detailed discussion on this issue see Kontny in preparation a.

[190] Kontny 2017b, 38, 40 fig. 16.

[191] Jahn 1916.

[192] Godłowski 1992, 72.

[193] Kontny 2015a, 308–10.

[194] Liana 1970.

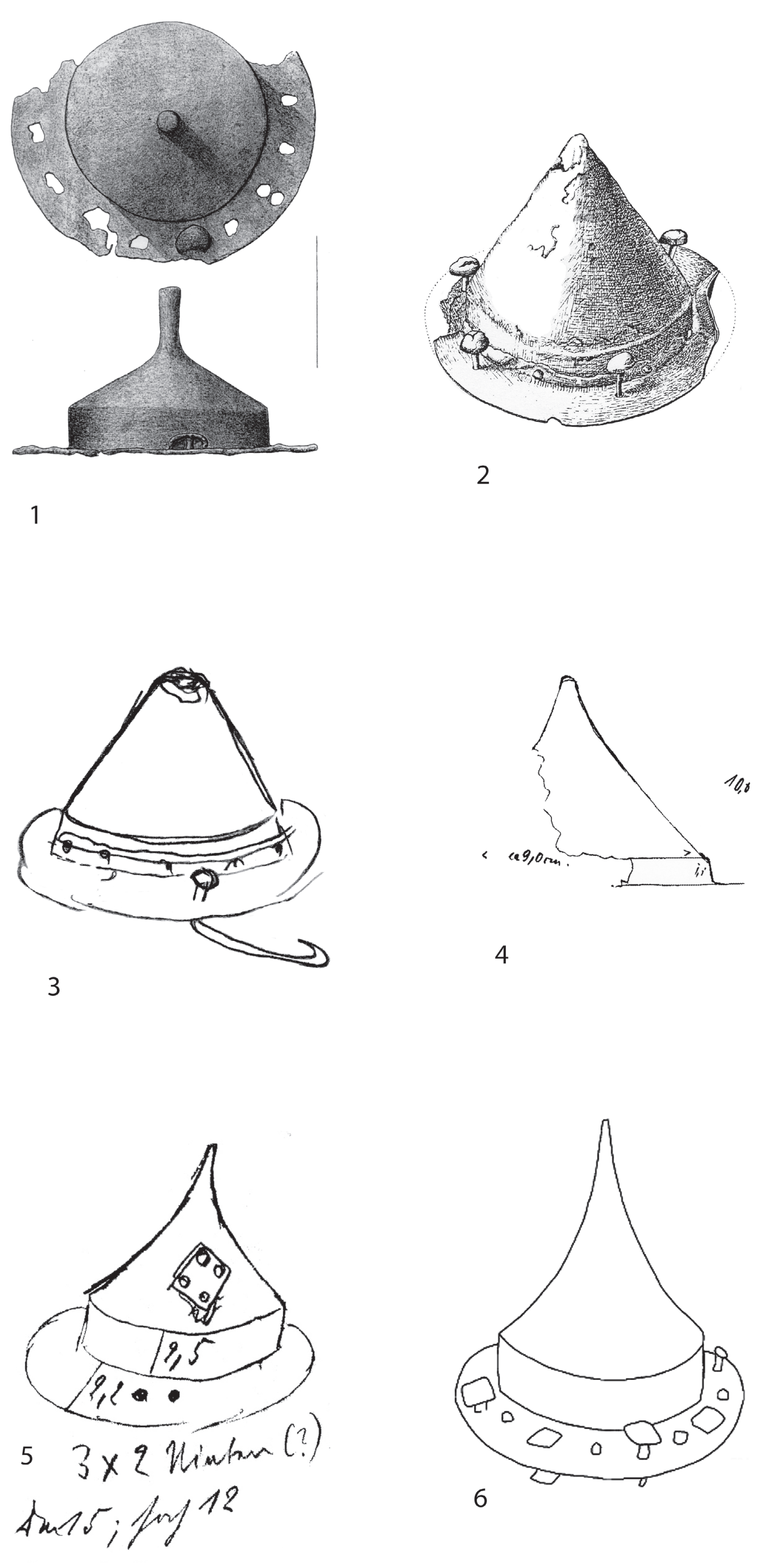

Figure 4.26. Shield bosses in the Bogaczewo Culture. 1, 6 — the collection of Jakob Ludwig Pisanski; 2 — Zełwągi; 3 — Mojtyny, Grave 71; 4 — Wólka (former Wolka-See); 5 — Machary, Grave 8 (1, 6 — after Nowakowski 1998, pl. 35:703–04; 2 — after Gaerte 1929, fig. 149:f; 3, 5 — after Jahn's heritage; 4 — after Kontny 2015a, fig. 2:2).

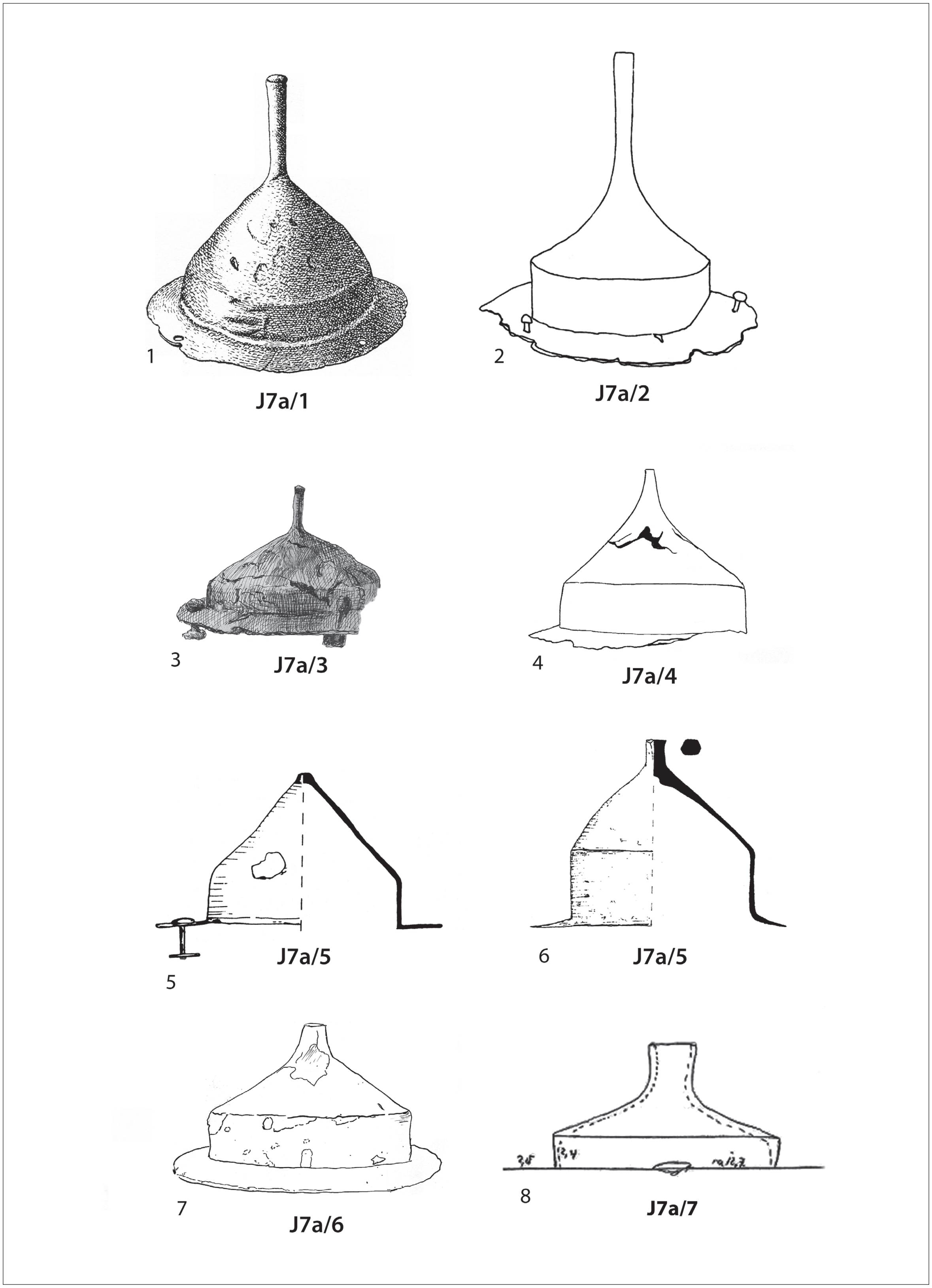

Figure 4.27. Scheme of typology of West Balt shield bosses of Type Jahn 7a. 1 — Machary; 2 — the collection of Jakob Ludwig Pisanski; 3 — Babięta, Site I, Grave 70; 4 — Babięta; 5 — Sterławki Małe, Grave 341; 6 — Paprotki Kolonia, Grave 44; 7 — Machary, Grave 187; 8 — Onufryjewo, Grave 370b (1 — after Gaerte 1929, fig. 149:c; 2 — after Nowakowski 1998, pl. 35:701; 3, 4, 7 — after Bitner-Wróblewska 2008a, pls LXXVII, CXXI, CCXVII; 5 — after Karczewska 1999, pl. XVI; 6 — after Karczewski 1999, fig. VI:1; 8 — after Kontny 2008d, fig. 9:b).

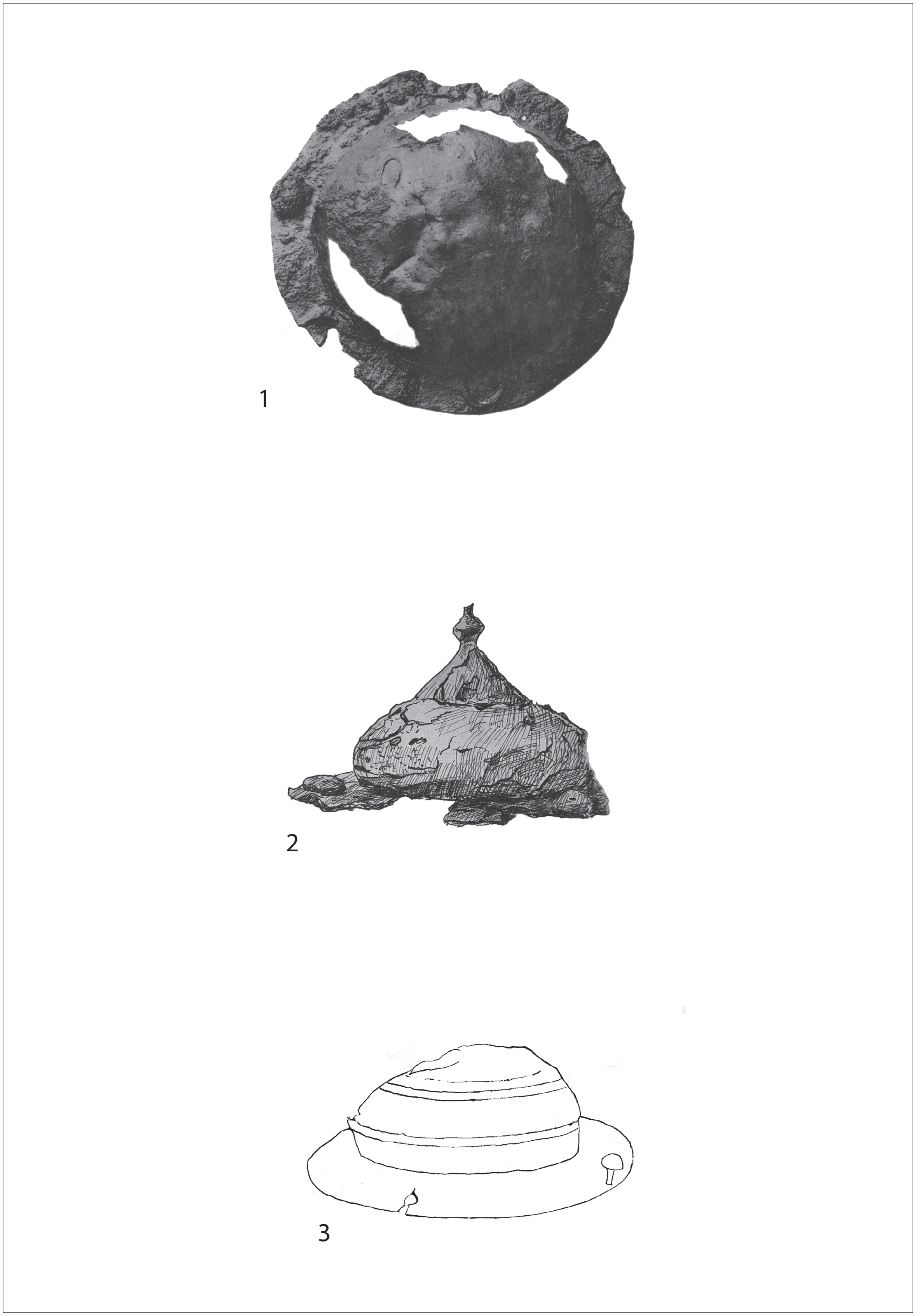

Figure 4.28. Shield bosses in the Bogaczewo Culture in the Younger Roman Period. 1 — Mojtyny, Grave 75; 2 — Babięta, Site I, Grave 323; 3 — Babięta, Site I, Grave 309 (1 — after Hollack and Peiser 1904, pl. IX.75:a; 2–3 — after Bitner-Wróblewska 2008a, pls C, CII).

(Fig. 4.27:5–6) and reduced to a minimum or even almost untraceable; chronology: B2(b)–C1(a).

6. Shield bosses of stubby proportions with short blunt spikes which are smoothly distinct from the cover — Fig. 4.27:7; chronology: C1.
7. Shield bosses with pseudo-spikes: the top part of the cone is thickened and hollow inside. It is narrowed in a dome-like manner, or is cylindrical and ends with a circular flattening — Fig. 4.27:8; chronology: C1.[195]

Jahn 8 shield bosses with semi-spherical cones (Fig. 4.28:1), including finds with knobs attached on the cone's top, rarely occur in the Bogaczewo Culture in Subphase C1b. This can be explained by the fact that the habit of furnishing graves with weapons was abandoned at around this time. In other Balt territories, where this custom was still in use, more artefacts of this kind are known, including those from later chronological phases, as well as from earlier periods in the Dollkeim-Kovrovo Culture.[196] A shield boss of Type Ilkjær 6c from Grave 323 at Babięta I (Fig. 4.28:2) is a testimony to Scandinavian influences. It is a hemispherical artefact with a fastened sharp and profiled spike, dated to Subphase C1b.[197] It is possible that a copper-alloy shield boss from Grave 309 at Babięta I (Fig. 4.28:3)[198] also found its way to the territory of the Bogaczewo Culture via Scandinavia, where analogous artefacts are widely known.[199] It was manufactured with the embossing technique and its cone is dome-shaped, which makes it different from other Roman artefacts in the *Barbaricum*. On the cone there are concentric circular lines engraved in three pairs, which is perceived as an unambiguously Roman trait.[200] The find from Babięta can be linked with Subphase C1b.[201]

Embossed Roman shield bosses also occurred in other regions of the Balt milieu. Two examples are known from the Dollkeim-Kovrovo Culture — a stray find from Kulikovo, Zelenogradsk District (former Elchdorf, Kr. Fischhausen),[202] and former Schakumehlen, Kr. Darkehmen (a now non-existent locality in the territory of the Bagrationovsk District).[203] The latter find was discovered in a hoard, together with thirty-two Roman coins. The latest issues are those of Faustina I and Marcus Aurelius.[204] This enables the researcher to relate the find to the late second century or even to a later period. In addition, these shield bosses may have found their way to the Balt territory via northern Europe.

Many Balt shield fittings demonstrate that solutions long abandoned in the Przeworsk Culture were still applied there in the Roman Period. These were, for instance, the use of large rivet and nail heads that fastened shield bosses and grips to the board (Fig. 4.29:1–2),[205] or a large number of fastening points (even a dozen or so, while three or four joining points were applied in other cultures of Barbarian Europe — Figs 4.26:6, 29:3). Furthermore, nails with long shanks were in use, and their ends were hammered from the inside into the shield plate (Figs 4.26:3).[206] Sometimes shanks' tips used to be placed oppositely (Fig. 4.30:6) which seems absurd as it exposed them to a risk of cutting and subsequently tearing off the shield during a fight. What is more, atypical and technically primitive methods of joining the cone and the wall with rivets were applied (Figs 4.26:2–3, 29:1, 3).[207] Yet another manifestation of this tendency are the finds from the Dollkeim-Kovrovo Culture, where shield bosses with blunt apexes are known. With regard to their proportions, they resemble Pre-Roman Period artefacts of Type Jahn 4a,[208] although they occur in Phase B2 (Fig. 4.29:4–5).[209] It is possible that some Bogaczewo Culture shield bosses whose context of discovery is not exactly known, such as Type Bohnsack 7 find from the collection of Jakob Ludwig Pisanski (Fig. 4.26:1),[210] or the Jahn 3a type artefact from Kosewo, Mrągowo District (former Kossewen II, Kr. Sensburg),[211] which have so far been believed to come from the Late Pre-Roman Period, are in fact such outdated shield bosses. Although up-to-date trends in the military sphere did reach the Balt territories, it is possible to notice some kind of conservatism with regard to manufacturing technologies and forms of shield fittings.

In the Sudovian Culture, shield bosses occurred in graves until a later period than in the Bogaczewo Culture. As a result, forms that were unknown in the Bogaczewo

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[195] The chronology of some variants may differ significantly in the case of the Dollkeim-Kovrovo Culture. For instance, Variant 7 was in use even until the end of the Roman Period, cf. Kontny 2019a, 102.

[196] Kontny 2015a, 310–13.

[197] Kontny 2008d, 96 fig. 9:a.

[198] La Baume 1941a, 10 fig. 6; in this publication as Macharren II.

[199] Kontny 2017b, 45, with further reading.

[200] Kaczanowski 1992, 62.

[201] What was found in this assemblage were, among other things, an Almgren 170 (?) fibula (cf. Bitner-Wróblewska 2007, 52); a penannular fibula with enamelled cells (Bitner-Wróblewska 2007, 47), a Madyda-Legutko 5.1 strap-end (see Madyda-Legutko 2011, 52–53), and Ginalski G1 spurs (cf. Ginalski 1991, 70).

[202] La Baume 1941a, 9.

[203] Raddatz 1993, fig. 8; Jankuhn's heritage; Jahn's heritage.

[204] Bolin 1926, 209.

[205] Cf. Adler 2002.

[206] Kontny 2017b, 30 fig. 11; 2019a, 102 fig. 4:1; cf. Jahn 1916, 156–58 fig. 177.

[207] Kontny 2017b, fig. 11:1, 3.

[208] Jahn 1916, 154.

[209] Jahn 1916, 30 fig. 11:5–7.

[210] Kontny 2007a, 94–95 figs 1:c, 2:c, with further reading.

[211] Kontny 2014a, 363.

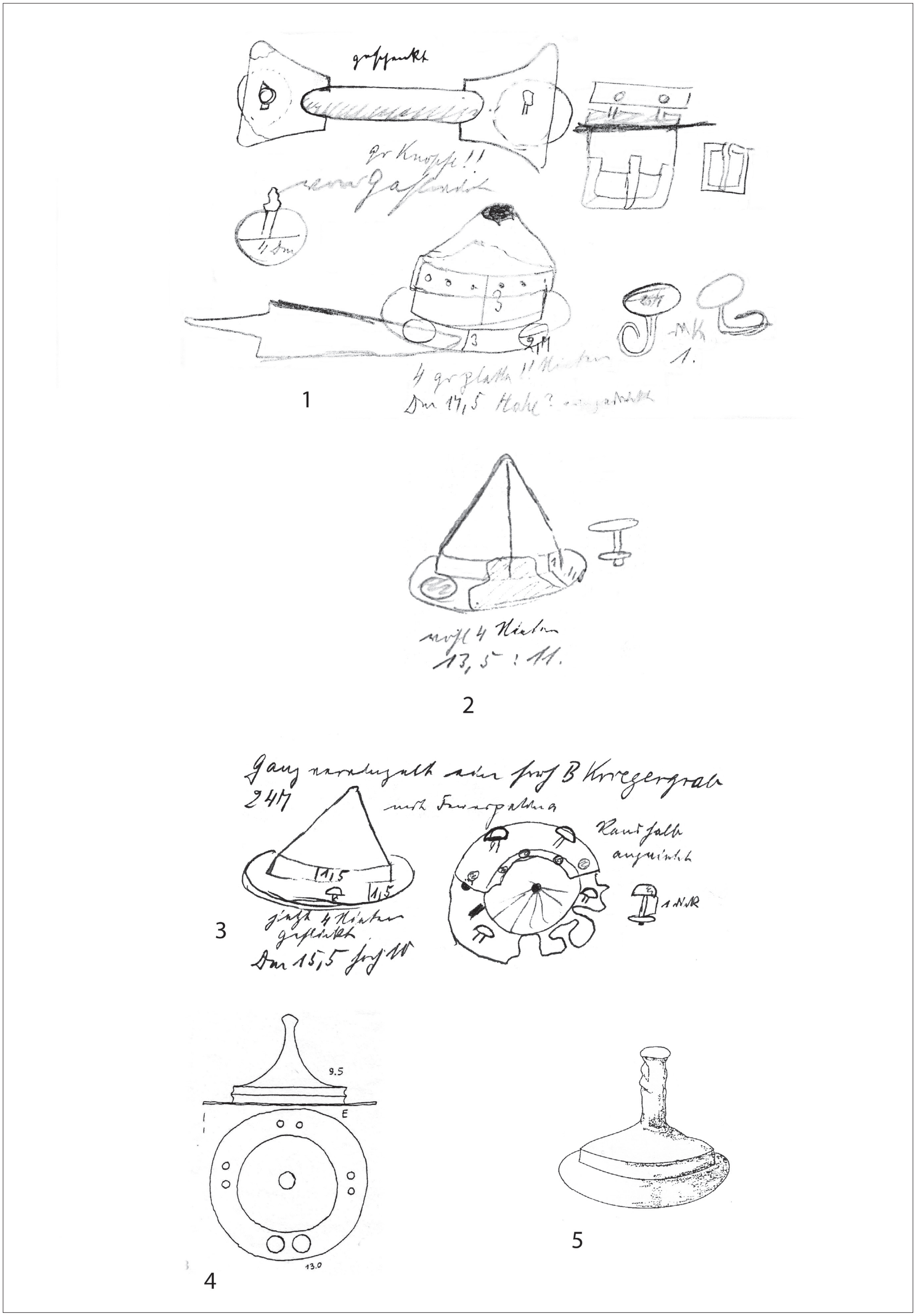
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Figure 4.29. Archaic parts of Balt shield bosses (1, 2 — nails/rivets with large heads, 3 — a high number of nails/rivets, 4–5 — examples of Type Jahn 4a artefacts from the Roman Period). 1, 2 — Nikutowo, stray finds; 3 — Spychówko, Grave 247 from the research of Hollack in 1902; 4 — Kovrovo, Grave 15; 7 — Âroslavskoe (former Schlakalken), Grave 14 (1–3 — Bogaczewo Culture; 4–5 — Dollkeim-Kovrovo Culture; 1–3, 5 — after Jahn's heritage, 4 — after Jankuhn's heritage).

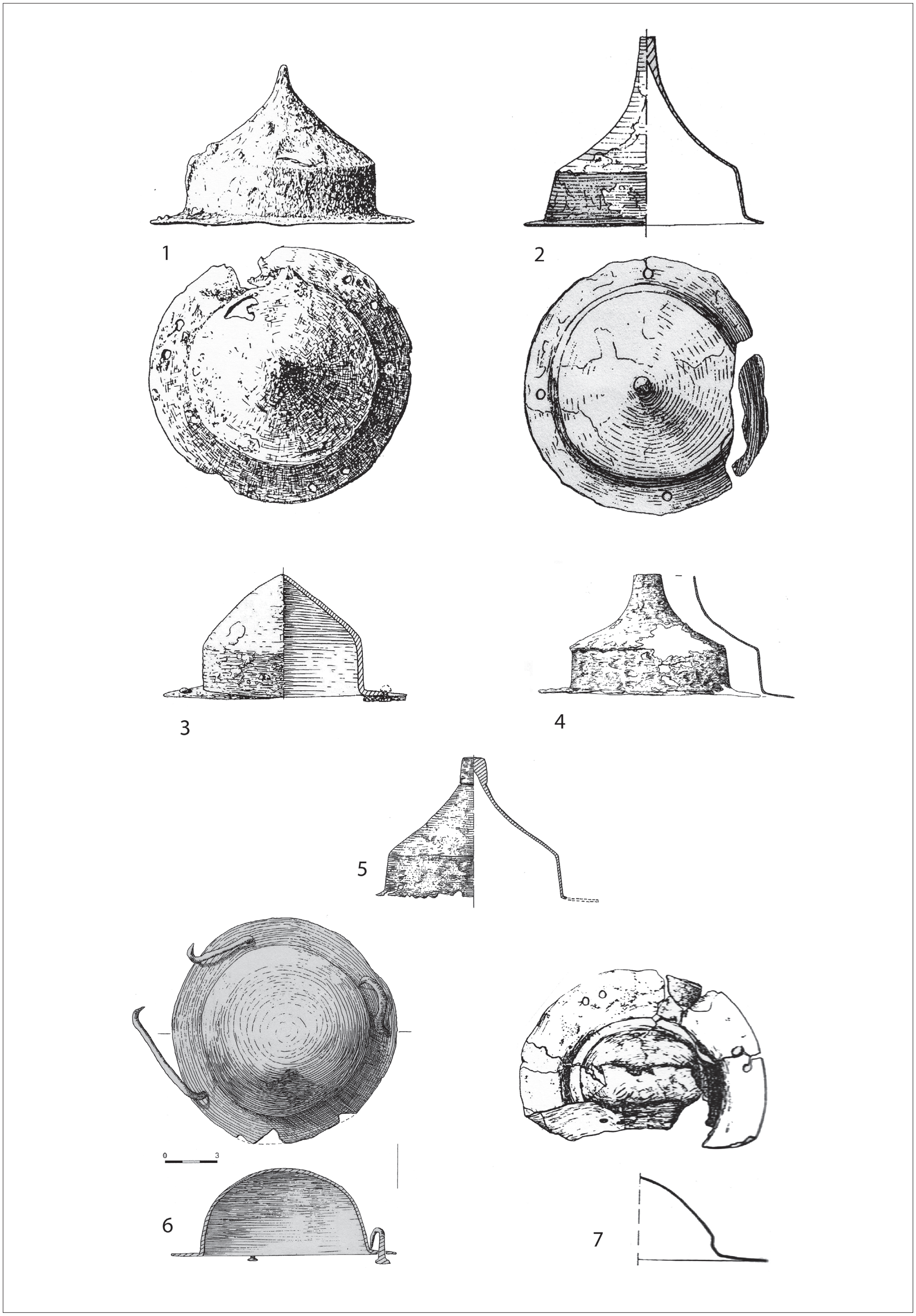

Figure 4.30. Shield bosses in the Sudovian Culture. 1 — Osowa, Barrow 8, Grave 1; 2 — Netta, Grave 12; 3 — Żywa Woda, Barrow 13, Grave 1; 4 — Szwajcaria, flat Grave S.25; 5 — Szwajcaria, Barrow LXVIII; 6 — Netta, Grave 79; 7 — Osowa, Barrow 88 (1 — after Jaskanis 1958, pl. XVI:2; 2, 6 — after Bitner-Wróblewska 2007, pls VII:5, XXXIX:4; 3 — after Ziemlińska-Odojowa 1961b, pl. VII:16; 4–5 — after Jaskanis 2013, pls LXVII:1, CX:3; 7 — after Jaskanis 1962, pl. I:10).

Culture were also identified there, although many types were recorded in both cultures. Concerning stylistics, the earliest form is a find from Osowa, Barrow 8, Grave 1; it can be classified as Type Jahn 6 (Fig. 4.30:1). On the other hand, this artefact occurred in a much later context than a vast majority of forms of this kind, namely in Subphase C1a. This is yet another example of a long tradition of archaic solutions in the Balt milieu.[212] Shield bosses of Type Jahn 7a Variant 4 are equally rare, such as a find dated to Subphase C1(a) from Netta, Grave 12 (Fig. 4.30:2).[213] On the other hand, artefacts belonging to Variant 5 are much more frequent — Fig. 4.30:3 (they occur in Phase C1).[214] Furthermore, examples of Variant 7 are also known and their chronology is the same (Fig. 4.30:4–5).[215] So far, shield bosses with hemispherical cones of Type Jahn 8 have been the most numerous (Figs 4.15:10, 4.30:6). They are dated from Phases C1–C2, perhaps excluding the earliest part of this period.[216] This also concerns artefacts with concave-profiled walls (Szwajcaria, Barrow 52, Grave 1 from Subphase C1b).[217] Another solution that was recorded is a Type Zieling L shield boss discovered in Grave 1 in Barrow 88 in Osowa (Fig. 4.30:7).[218] It is remarkable for its dome-like cone, a relatively wide rim and a profile of the wall that is bent inside. Such forms are known from Phases C1b–C2.[219] A morphologically similar shield boss was found in Barrow 41,[220] and its chronology is analogous.[221]

In some shield bosses from the Sudovian Culture it is possible to observe traces of gouges (Netta, Grave 79,[222] Szwajcaria, Barrow 52, Grave 1).[223] In the case of the discovery from Netta (Fig. 4.30:6) it is theoretically possible that one deals with traces of ritual destruction (it is a cremation grave, and in many Barbarian cultures there was a habit of intentional and sacrally motivated destruction of weaponry that was deposited into such graves). On the other hand, in inhumation graves (the feature from Szwajcaria is one of these), no traces of such practices have been encountered so far. Therefore, it seems very likely that this deformation was a result of combat.

Shield Grips

With regard to their typology, the earliest forms of shield grips in the Bogaczewo Culture are those of Type Jahn 5 (Fig. 4.31:1–2).[224] They were in use there for longer than in many other cultures of Barbarian Europe (Phase B1), that is throughout the entire Early Roman Period.[225] So far, no shield grips belonging to Types Jahn 6, 7, and 8 have been found in the Bogaczewo Culture (there is only one find that is similar to Type Jahn 8, see Fig. 4.31:5). On the other hand, such artefacts are known, e.g., in the Dollkeim-Kovrovo Culture. Shield grips with gutter-like handles (Type Jahn 9) are relatively numerous, including those with distinct rivet plates (Figs 4.29:1, 4.31:3–4). They form a heterogeneous group, and they mainly differ in the shape of rivet plates. These are rectangular, fan-shaped, or trapezoid with straight or convex shorter sides. They occurred in Subphase B2b, although it is possible that this chronological framework could be extended to Phases B2–C1a. This means that a difference in relation to the chronology of similar forms in central and north European *Barbaricum* is not significant, provided that there is actually any difference at all.[226]

Concerning shield grips with gutter-like handles, there is no doubt that the most numerous group are those with trapezoid long rivet plates. Such artefacts can be classified as Variant Ilkjær 5b (Figs 4.19:3, 4.31:6–7)[227] and are dated to Phase C1, analogously to Przeworsk

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[212] Cf. Jaskanis 1958, 84 pl. XVI:2–4; Kontny 2015a, 309–10.

[213] Bitner-Wróblewska 2007, 14–15 pl. VII:5. What was found in this assemblage were, e.g. a Beckmann B II pin (cf. Juga-Szymańska 2014, 147–49, 326 fig. 96 pl. XL:2), an Almgren 158 brooch (cf. Bitner-Wróblewska 2007, 47–48), and two Madyda-Legutko C13 buckles (cf. Madyda-Legutko 1986, 19).

[214] Kontny in preparation a.

[215] Kontny 2017b, fig. 16:9–10.

[216] Kontny 2015a, 310.

[217] Jaskanis 2013, 106 pl. CXCIX:4 (the image does not demonstrate the profile's bend, cf. collection of the State Archaeological Museum in Warsaw, inv. no. PMA IV/4996–335). Reliable time markers were found in this assemblage, among others the buckles of Types E14 and G14 (cf. Madyda-Legutko 1986, 40, 55 table 9), a fibula that is similar to Type Almgren 167 (cf. A. Bitner-Wróblewska 2007, 49–51), and a spur belonging to Subgroup G1 (cf. Ginalski 1991, 70).

[218] Jaskanis 1962, 241, 243 pl. I:10–11; the collection of the Podlachian Museum in Białystok, inv. no. MB/A/116, cat. no. 344.

[219] Zieling 1989, pl. 14:5–6; Godłowski 1994a, figs 1, 5.

[220] Jaskanis and Jaskanis 1961, pl. X:7; the collection of the Podlachian Museum in Białystok, inv. no. MB/A/96, cat. no. 189 (the drawing in the publication does not render the actual profile of the shield boss).

[221] i.e. Madyda-Legutko D30 buckles were found in an adjacent horse grave (cf. Madyda-Legutko 1986, 33).

[222] Bitner-Wróblewska 2007, 25–26 pl. XXXIX:4.

[223] Jaskanis 2013, 106 pl. CXCIX:4.

[224] Jahn 1916.

[225] A find from Czerwony Dwór, Gołdap District, Feature 56 is one of the later examples of this kind. What was found in the assemblage were, among other things, a Type Almgren 61 eye fibula, a ring with bent ends, and a Jahn 7b type shield boss (Piotr Iwanicki, MA from the State Archaeological Museum in Warsaw and Dr habil. Paweł Szymański from the Faculty of Archaeology, University of Warsaw, personal communication, for which I am indebted).

[226] Cf. Ilkjær 1990, fig. 200; Godłowski 1992, 72; 1994a, fig. 1:2–4; Zieling 1989, 214–15.

[227] Ilkjær 1990.

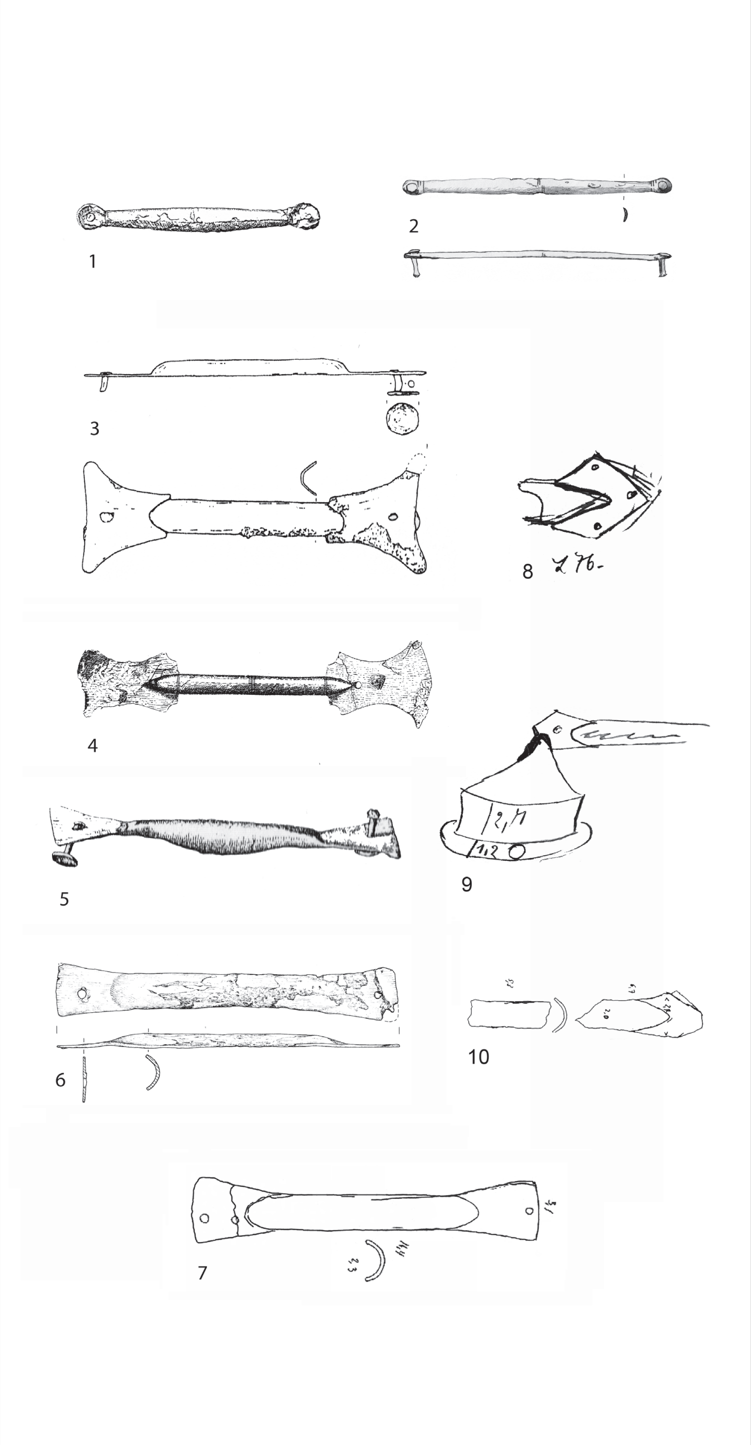

Figure 4.31. Shield grips in the Bogaczewo Culture (1–7, 9) and analogies in the Dollkeim-Kovrovo Culture (8, 10). 1 — Zełwągi; 2 — Judziki, stray find; 3 — Paprotki Kolonia, Grave 163; 4 — Marcinkowo, Grave 34a; 5 — Muntowo, Grave 47; 6 — Wyszembork, Grave 61; 7 — Onufryjewo, Grave 291; 8 — Berëzovka, Grave 1; 9 — Spychówko, Grave 72, from the research of Hollack in 1902; 10 — Izobil'noe, barrow (1, 4, 5 — after Gaerte 1929, figs 149:f, 198:d–e, 2 — drawing Bartosz Kontny, 3 — after Karczewski 1999, fig. XVI:3, 6 — after Szymański 2005, pl. XXIV:3, 7 — after Kontny 2008d, fig. 10:b, 8 — after Jakobson's heritage — Gross Sausgarten 003, 9 — after Jahn's heritage, 10 — after Jankuhn's heritage).

Culture, Elbe Germanic area, and Scandinavian finds. In the Dollkeim-Kovrovo Culture, such finds were also recorded in Phase C2.[228] Atypical forms sometimes occur, e.g. a find from Spychówko, Szczytno District (former Klein-Puppen, Kr. Sensburg), Grave 72 from Emil Hollack's research in 1902.[229] This artefact is solely known from an imprecise drawing in Jahn's files (Fig. 4.31:9) and it provokes many doubts concerning its form. It seems, however, that it was a slender find and its rivet plate was polygonal. It was fastened with a single rivet or nail placed in the plate and can be dated to Subphase C1b.[230] Although it has no analogies in present-day classifications, its counterpart can be pointed out in the Balt milieu — a find from a Dollkeim-Kovrovo Culture barrow in Izobil'noe, Polessk District (former Klein-Fließ, Kr. Labiau).[231] It is a very similar shield grip (covered with a bronze sheet) dated to Phase C1 (Fig. 4.31:10).[232] Therefore, it is in all probability a local Balt form, which I propose to call Type Klein-Fließ. Such an artefact was also recorded in Grave 1 from Berëzovka, Gvardejsk District (former Groß Sausgarten, Kr. Pr. Eylau — Fig. 4.31:8).[233]

Only three shield grips have been found so far in the territory of the Sudovian Culture. All were discovered in the burial ground in Osowa, Suwałki District, Barrows 25, 41, and 88, Grave 1. The two latter finds[234] belong to forms with nearly flat grips, with short pentagonal rivet plates. Analogies to such artefacts are solely known in the territory of the Przeworsk Culture, in layered cremation necropoleis of Type Dobrodzień.[235] On the basis of the chronology of such sites, it is believed that such shield grips belong to Group 8, according to Godłowski, and thus they can be dated to Phases C3–D1.[236] Both aforementioned finds from Osowa imply that similar shield grips may have been in use earlier, perhaps in Phase C2. This is due to the fact that they are accompanied by Zieling L[237] shield bosses, and in the first case also by Madyda-Legutko D30 buckles.[238] The third find, i.e. the artefact from Barrow 25,[239] also demonstrates association with the Przeworsk Culture. A similar, almost flat shield grip with trapezoid rivet plates was found in a Przeworsk Culture layer burial ground in Szczedrzyk, Częstochowa District,[240] and in a gravefield with groove-like features in Żabieniec, Częstochowa District.[241] Similar solutions are also testified to in the Balt milieu.[242] It is virtually impossible to define a precise chronology of the assemblage from Osowa, due to the lack of other time markers. On the other hand, if one considers finds from the territory of the Przeworsk Culture as a point of reference, the discussed assemblage can be related to Phases C3–D1. This is because the mentioned cemeteries of the Przeworsk Culture are dated to these phases.[243]

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[228] Kontny 2015a, 313–15.

[229] Schmiedehelm's heritage 7.13.33, 7.13e.93; PM-A 1781/2, p. 033; Jahn's heritage.

[230] Such a chronology is suggested by accompanying finds, that is spurs of Type Ginalski G1 (cf. Ginalski 1991, 70) and a shield boss of Type Jahn 7a, Variant 7.

[231] Heydeck 1900, 59 pl. VI:6; Jankuhn's heritage; Jahn's heritage; inv. no. Prussia-Museum PM V.144.7724b.

[232] What was found in the assemblage were, among other things, a fibula that is similar to Group Almgren VII, Series 1, a Jahn 7a type shield boss, and a *terra sigillata* vessel from Cinnamus's workshop in Lezoux (cf. Nowakowski 1996b, 71 table XVI:d, pl. 99).

[233] In this case the plate is rhombic and is fastened with three rivets: Stadie 1919, 443–44; Jakobson's heritage — Gross Sausgarten 003. This assemblage should be dated to the beginning of the Migration Period. This is because it included a silver crossbow fibula with a bow bent in a knee-like manner. The fibula was ornamented with rings of incised wire. The assemblage also contained a 2a-type dagger-knife (see Prassolow 2013b, 123).

[234] Jaskanis and Jaskanis 1961, 40 pl. X:3, the collection of the Podlachian Museum in Białystok, cat. no. 96 (the published drawing does not display the rivet plate that survived in the museum's collection); Jaskanis 1962, 243 pl. I:11.

[235] Dobrodzień-Rędzina, Olesno District — Szydłowski 1974, 77 pl. XCVI:b; Olsztyn, Częstochowa District — Szydłowski 1974, 141 pl. CLXXI:b.

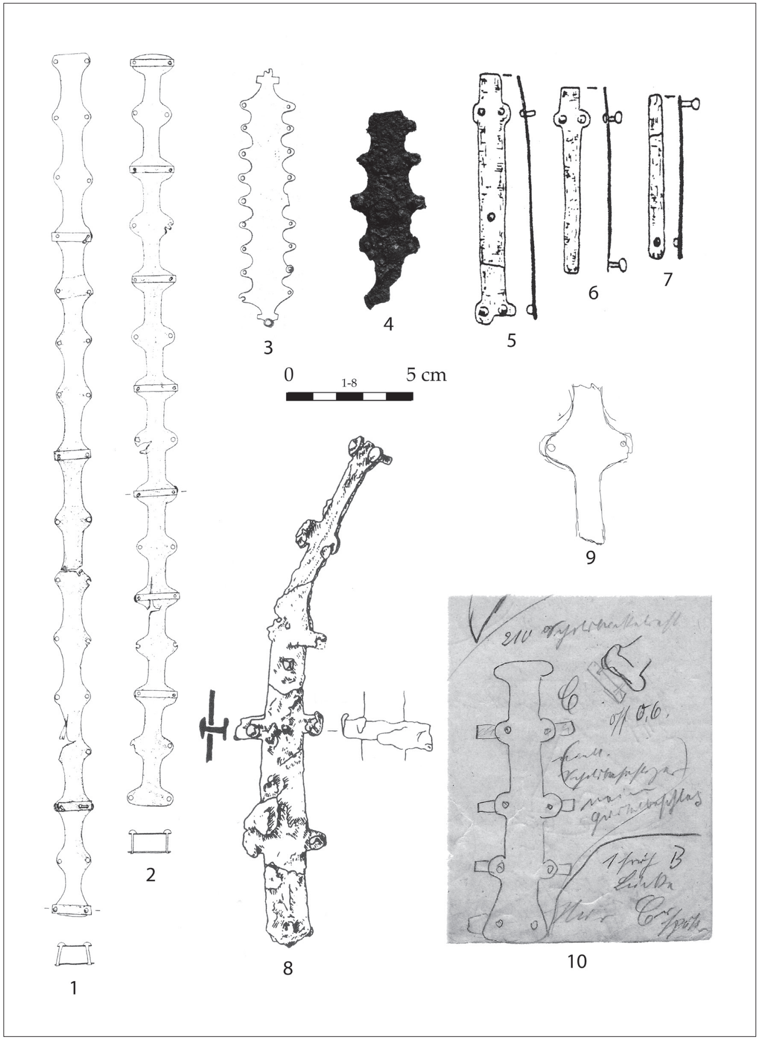

Figure 4.32. Shield plate fittings from northern Europe (1–3), the Przeworsk Culture (5–7), the Dollkeim-Kovrovo Culture (8), and the Bogaczewo Culture (4, 9, 10). 1, 2 — Nydam, 3 — Thorsberg, 4 — Gąsior, Grave 213, 5–7 — Kryspinów, Grave 25, 8 — Kovrovo, Grave 306, 9 — Nowy Zyzdrój, Grave 117, 10 — Spychówko, Grave 210 from the excavations of Hollack in 1902, 9, 10 — not to scale (after Kontny 2017b, fig. 12).

Other Shield Fittings and Shield Shapes

Other shield fittings are also known in the Bogaczewo and the Dollkeim-Kovrovo Cultures. These are made from oblong metal sheets, usually with wavy lateral edges. Such fittings were riveted to shield plates in order to reinforce or repair them (Type Zieling D). They are a testimony to the adaptation of Scandinavian solutions (Fig. 4.32).[244] In both aforementioned cultures, it is also possible to point out gutter-like edge fittings. Sometimes they render a reconstruction of the shape of the entire shield possible, which applies to finds from the Early Roman Period (Fig. 4.33). Such shields were elongated, and their shape was similar to that of a rectangle. Their corners were rounded,[245] which means that such shields could also be used in offensive combat. This is also demonstrated by the fact that shields of this kind were equipped with spiked bosses.

It is possible that an iron part that was deposited above the left tibia of a warrior buried in Barrow XXIV in Szwajcaria (Sudovian Culture) can be interpreted as a shield edge fitting (Fig. 4.34:3).[246] Fittings that are arranged at an angle in relation to one another

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[236] Godłowski 1994a, fig. 1:72.

[237] Cf. previous remarks on the shield boss from Barrow 88.

[238] Cf. Madyda-Legutko 1986, 33.

[239] Jaskanis and Jaskanis 1961, 33 pl. VIII:16.

[240] Szydłowski 1974, 24 pl. VII:a.

[241] The collection of the Institute of Archaeology of the Jagiellonian University, inv. no. 129/63.

[242] Dollkeim-Kovrovo Culture: Gora Velikanov also known as 'Hünenberg', Zelenogardsk District (former Rantau, Kr. Fischhausen), Grave H-31K (Kulakov 2014, 219 fig. 95:4); East Lithuanian Barrow Culture: Baliuliai, Švenčionys District, Barrow 3, Grave 2 (Kurila and Kliaugaitė 2007, fig. 19:4; Kiulkys 2010, 98–99 fig. 34). Similar finds can also be pointed out in the Pontic zone (Kazanski 1994, 480–81 fig. 5:24–25).

[243] Godłowski 1985a, 118–19; Mączyńska 1999, 26.

[244] Kontny 2017b, 30 fig. 12; 2019a, 109–10 fig. 10, with further reading.

[245] La Baume 1941a, 5–9 figs 3–4.

[246] Jaskanis 2013, 41 pl. XXXVI. Regrettably, this find did not survive and thus it cannot be verified.

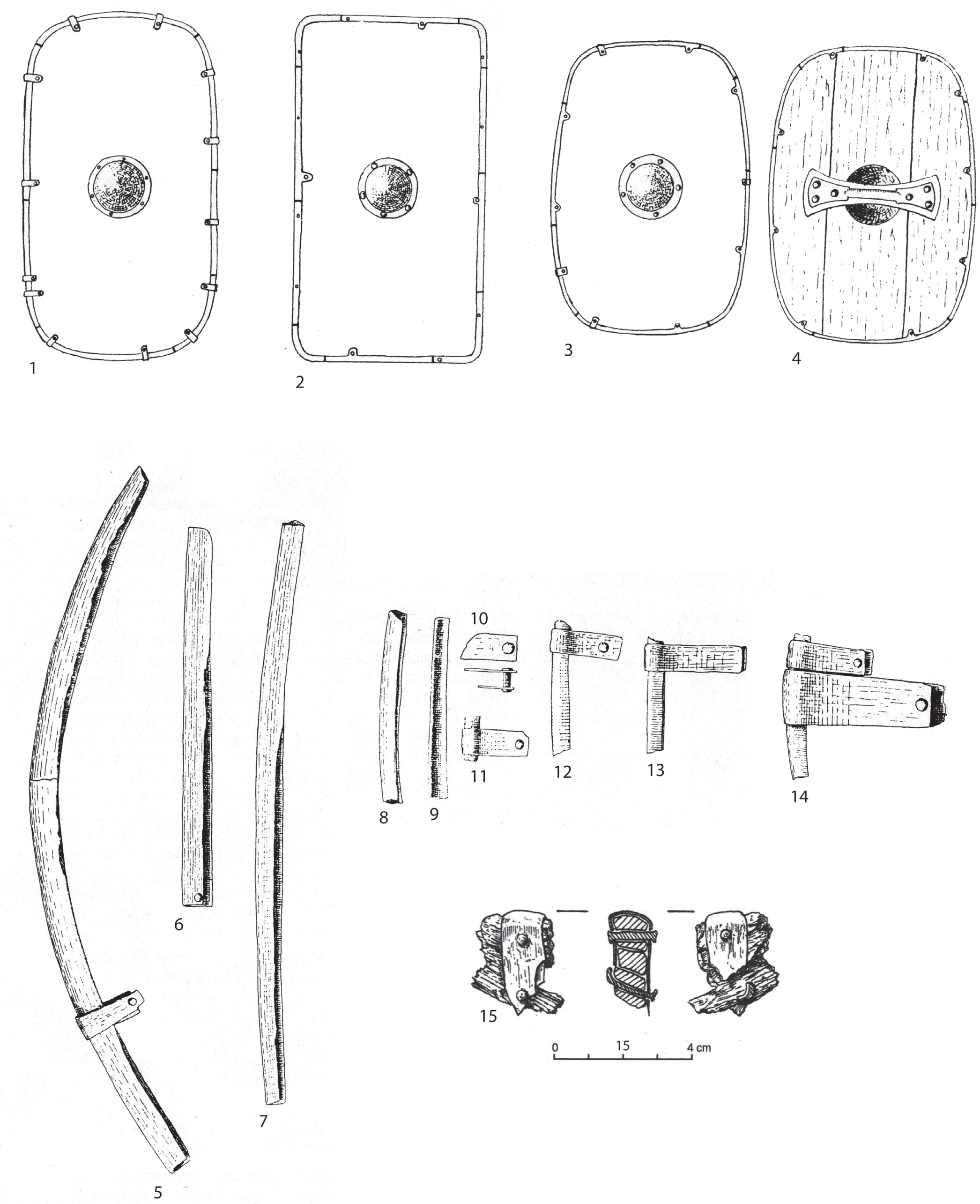

Figure 4.33. Shield edge fittings. 1 — shield of the Gonschor type, 2 — shield of the Dollkeim type, 3 — shield of the Gross Ottenhagen type, 4 — shield of the Kirpehnen type; 5–7 — Gąsior, Pisz District, Grave 212; 8–14 — Marcinkowo, Mrągowo District, Grave 329; 15 — Szwajcaria, Barrow 26 (1–14 — after La Baume 1941a, figs 2:a–k, 3, 4; 15 — after Jaskanis 2013, pl. CLXIV:4).

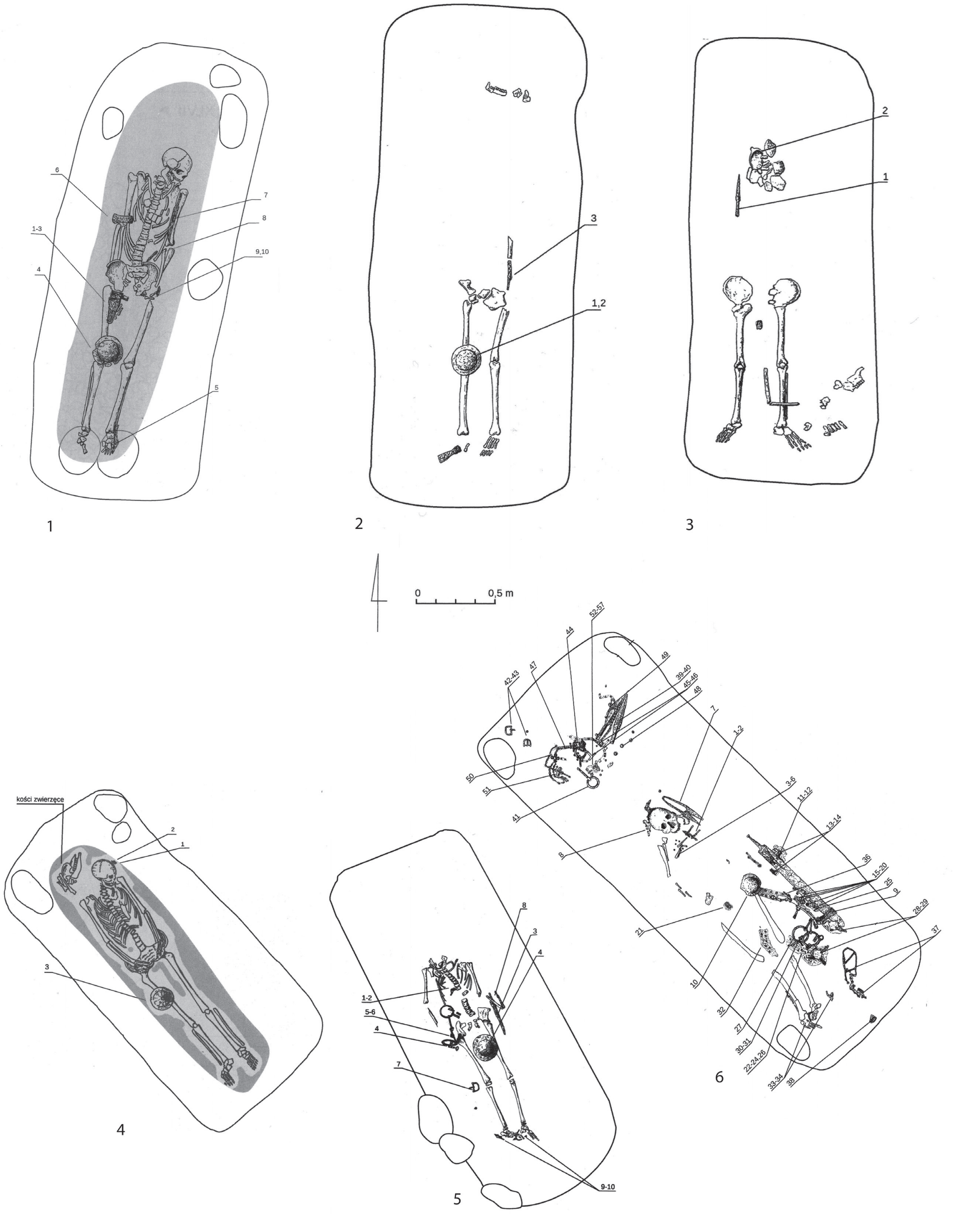
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Figure 4.34. Plans of inhumation graves with shield elements from the cemetery of the Sudovian Culture at Szwajcaria. 1 — Barrow XLVII, Grave 2; 2 — Barrow LXVIII; 3 — Barrow XXIV; 4 — flat Grave S.25; 5 — Barrow 52, Grave 1; 6 — Barrow 2, Grave 1 (after Kontny 2021b, fig. 2).

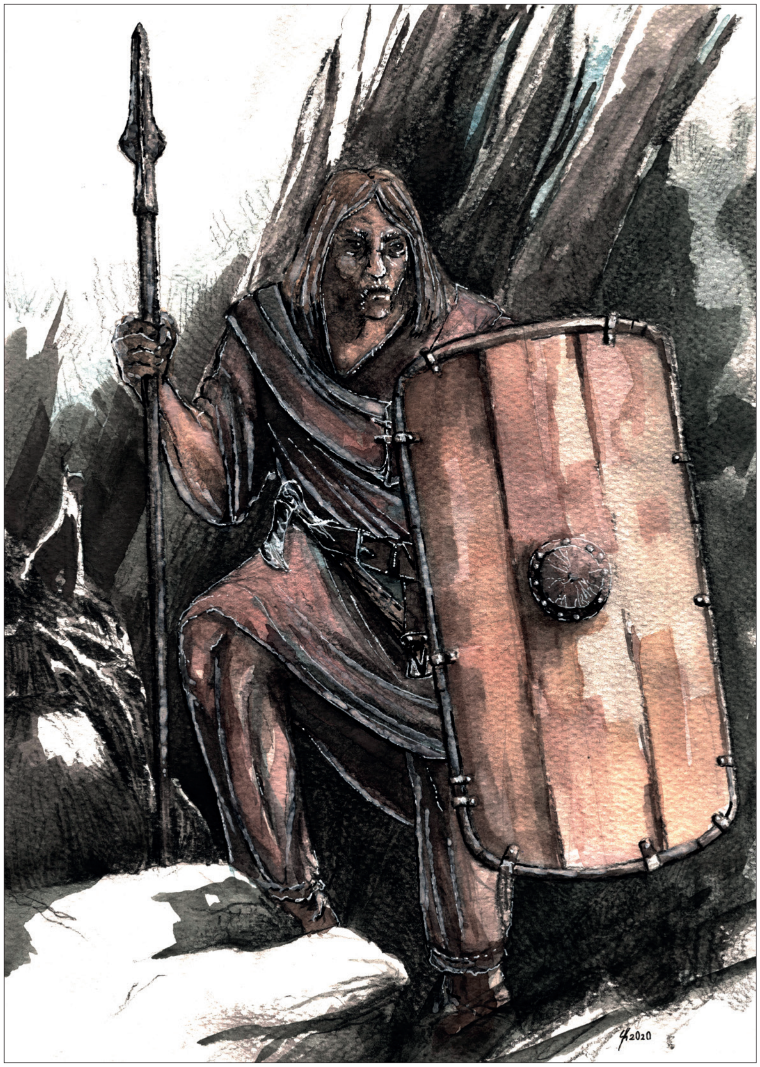

Figure 4.35. Sudovian Culture warrior (drawn by Stanisław Kontny, according to the concept of Bartosz Kontny).

suggest oblong shields with slightly convex sides. The assemblage is to be dated to Phase C1.[247] However, there are further grounds for the reconstruction of shields' shapes in the Sudovian Culture, i.e. one can analyse a number of inhumation graves with weapons that contained shield elements.[248] A repetitiveness in the placement of shield bosses has been observed; they have been found in the vicinity of legs, e.g. at the knees, usually with a minimal shift toward one of them, at the mid-length of femurs, or at the left hip (Fig. 4.34). The fittings were oriented with the dome upward, which means that the shield was placed in front of the warrior. Judging by the imprint of fabric on the shield grip from Barrow 25 at Osowa, Suwałki District, it seems that the shields were placed directly on the deceased (on his clothes). None of the cases indicate that the hands of the deceased rested on the upper edge of the shield. The shields were elongated (considering other Balt specimens, probably roughly rectangular, sometimes with slightly arched sides — Fig. 4.33:1–4), and their lengths ranged from 0.6 to 1.1 m; their widths are more difficult to estimate (probably 0.3–0.6 m). Individual preferences may account for the differences in dimensions — see the reconstruction of the appearance of a Sudovian warrior (Fig. 4.35).

Mail Armour

Armour was recorded only once in the discussed territory and period: fragments of iron mail armour were found at the offering site in Czaszkowo (Fig. 4.36:1). One of these was wrapped around a shafted weapon head with a pronounced rib. The mail rings' external diameter was 0.6–0.65 cm, while the internal one was 0.45–0.55 cm. Although the ring arrangement cannot be precisely reconstructed, it is assumed that the rings were joined in a 4 × 1 arrangement. The mail was composed of some rings punched out from a metal sheet but also riveted ones (Fig. 4.36:2).[249] It is not possible to precisely establish the chronology of finds from the former Lake Nidajno, as all artefacts were mixed up. As in the case of the entire site, the Roman Period and the Early Migration Period can generally be proposed. The shafted weapon head around which the mail was wrapped had a pronounced rib. Such a trait is rather typical of the Roman Period in the Balt milieu.[250] However, as it is virtually impossible to properly identify the artefact with regard to its typology, it is also difficult to draw firm chronological conclusions on this basis. Roman mail armour, in all probability adopted from the Celts, was already in use in the Republican Period until the Dominate.[251] In the Barbarian milieu of the Roman Period, discoveries of complete or large parts of mail armour are rare.[252] These are generally Roman-made artefacts (or Celtic products in the Pre-Roman Period).

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[247] What was found in the assemblage were, among other things, a shafted weapon head of Type XI according to Kaczanowski, see 1995, 21, and a Szwajcaria type mug; concerning their chronology see Iwanicki 2004.

[248] Kontny 2021b.

[249] Kosiński and others 2016, 163–68 figs 5–6.

[250] Cf. Kontny 2007b; Kaczanowski 1995; Kazakevičius 1988.

[251] Bishop and Coulston 2006, 63, 95, 139, 170, 208, 241–42.

[252] These artefacts are known from graves and sacrificial lake offerings, while finds from settlements are exceptional, cf. Kaczanowski 1992, 57–60. In the discussed case one is in all probability dealing with remains of a complete set of mail armour/s and not with small fragments that were used as amulets, see Czarnecka 1994, 245–53; cf. also Chapter 2.

However, instances of providing them with local fittings are known in northern Europe. These prove at least some contribution by local craftsmen.

What is more, it has been recently found that Barbarian provenance can be assumed in the case of some finds.[253] It is obviously difficult to point out periods when such artefacts may have been more popular. The most common ring diameter of Roman mail was larger than that from Czaszkowo, as it was 0.7–0.8 cm.[254] A new study concerning chronological variability of mail construction suggests that finds with a low ring diameter, such as those from Czaszkowo, and with a similar (rather considerable) ring thickness can be related to the first–second centuries. Only in the northern provinces (Britannia, Germania Inferior) were the artefacts with smaller and massive rings in use for longer, up to the third century.[255] This seems to imply that — if one is actually dealing with Roman mail armour — they are not dated to a later period than the third century. Thus, they should perhaps be related to the time when this territory was inhabited by the Bogaczewo Culture population. Such conclusions can also be drawn on the basis of the form of the shafted weapon head around which the mail fragment was wrapped. The use of bronze rivets for joining the rings could be an indication concerning the Roman provenance of the artefact.[256] Regrettably, such information has not been obtained so far in the case of the Masurian find. In theory, a later chronology of the mail armour from Czaszkowo could be taken into account. However, as finds from the Medieval Period have not been discovered so far, such a hypothesis must be rejected for the time being.

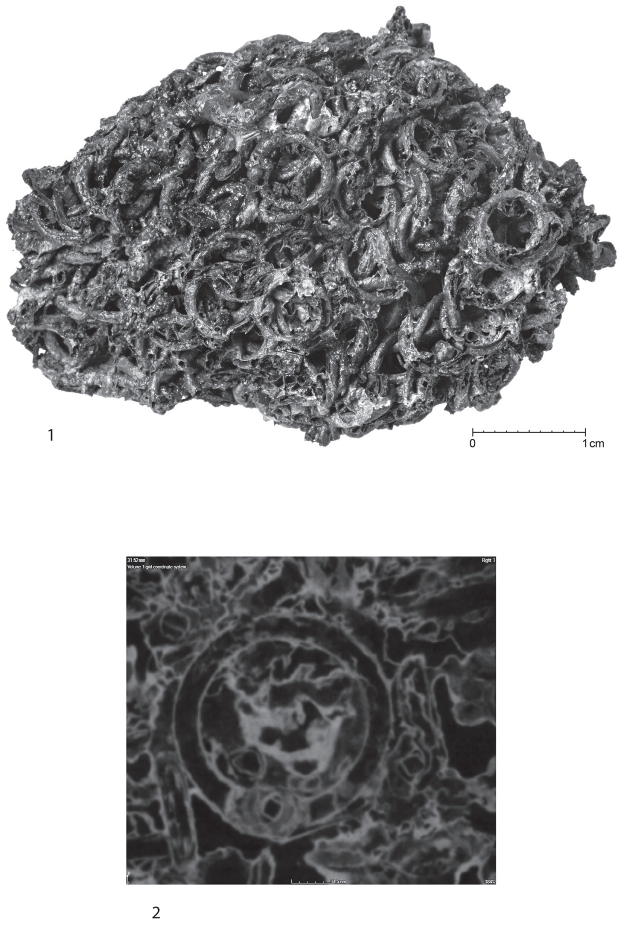

Figure 4.36. Ring-mails from Czaszkowo. 1 — view of a large fragment, 2 — X-ray photo of a riveted link (after Kosiński and others 2016, 166, fig. 5:d).

Bows and Arrows

The use of bows is evidenced in the Balt milieu by the finds of arrowheads.[257] However, in the Roman Period, these weapons were in all probability mainly used for hunting, as was the case with the Przeworsk Culture. This can be explained by their low effectiveness in combat. Such an assumption was confirmed experimentally, especially with regard to leaf-bladed arrowheads. On the other hand, the width of these arrowheads suggests their usefulness in hunting. A strike with such a weapon causes a large wound, which facilitates tracking the prey by following the trail of blood.[258] In the Bogaczewo Culture, there are leaf-shaped arrowheads that were

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[253] Local mail fasteners were found at the bog site in Thorsberg, Kr. Schleswig-Flensburg. Furthermore, some Barbarian traits could also be observed on decorative phalerae that were originally fastened on the mail, see Matešić 2015, 219–23, pls 105, 108. Mail rings that were discovered there were so large (more than 1 cm in diameter), that their possible use in the Barbarian milieu should be taken into consideration, Matešić 2015, 214–18 (on the other hand, the author mentions a few examples of larger finds that are undoubtedly Roman). What is more, mail armour from the Vimose bog in Funen was probably manufactured in a Barbarian workshop. This is suggested by its style which was modelled on the Germanic tunic, see Wijnhoven 2015, 94–101.

[254] Kaczanowski 1992, 58.

[255] Matešić 2015, 215, 218 fig. 131.

[256] Matešić 2015, 218.

[257] See Kazakevičius 2004.

[258] See Chapter 2.

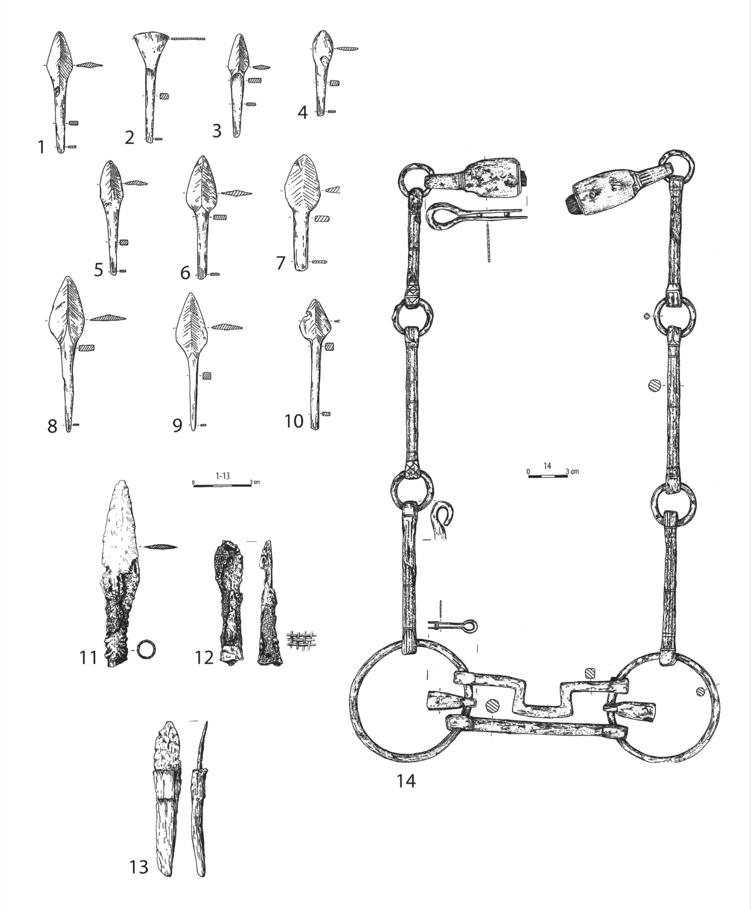

Figure 4.37. Arrowheads in the Bogaczewo Culture (1–10) and in the Sudovian Culture (11–13), and a bit with chain reins from the Bogaczewo Culture (14). 1–10, 14 — Paprotki Kolonia, Grave 72; 11–13 — Szwajcaria, Barrow 15, Grave 2 (1–10, 14 – after Bitner-Wróblewska and others 2001, fig. 8; 11–13 — after Jaskanis 2013, pl. CXLVI.2:4).

shafted both with the use of sockets[259] and with tangs.[260]

A series of shafted weapon heads with tangs from Grave 72 in Paprotki Kolonia (Fig. 4.37:1–10) should be considered hunting arrowheads. They belong to a whole array of forms, and their leaf- or fan-shaped blades imply hunting use. Perhaps their different shapes were meant to serve various purposes. Another two arrowheads with barbs are known from the territory of the Bogaczewo Culture. However, as there is no detailed data concerning their forms, it is impossible to discuss their likely use.[261]

A similar diversity of arrowhead shapes can also be observed in the Sudovian Culture (Fig. 4.37:11–13). Barrow 15, Grave 2 in Szwajcaria yielded three leaf-shaped arrowheads — two socketed ones and one with a tang,[262] while in Barrow XII one socketed artefact was found.[263] The only arrowhead seemingly meant for military use, which was implied by its needle-like shape, was discovered in the flat Grave S.12 (Fig. 4.25:2.3).[264]

It is also necessary to consider the intriguing possibility that the Balts were using trilobate arrowheads with tangs, which were characteristic of the nomadic milieu in eastern Europe. Such a hypothesis is extremely probable for the Migration Period, from which a high number of arrowheads of this kind were recorded in Lithuania, many in a military context. This means that such arrowheads were stuck into stronghold fortifications, and they have also been found embedded in the skeletons of the dead. Lithuanian researchers have proposed that the presence of these artefacts results from nomadic (Hunnic) invasions of the present-day Lithuanian lands in the Early Migration Period.[265] However, this assumption is not very credible, bearing in mind the very low number of finds of definitively Hunnic provenance from this territory. What is more, these lands were probably not very attractive for nomadic invaders, especially in comparison with Western Rome or Byzantium. Furthermore, rhombic trilobate arrowheads with tangs were effective and easy to make.[266] Such arrowheads were adapted from the Huns and the Alans by numerous Barbarian peoples, especially by their East Germanic allies. On the other hand, it is also possible to demonstrate the considerable popularity of such weapons among eastern European peoples of the forest zone, including the East Balts.[267] Such a possibility cannot be excluded in the Roman Period, either. This could be suggested by a finding from Grave 59 in the Bogaczewo Culture necropolis in Mojtyny. The discovered arrowhead has not survived until today, and the published photo is not precise enough to allow for unambiguous identification.[268] This artefact has already been classified as a tanged arrowhead.[269] However, bearing in mind an absence of decisive data, it is also possible that one is dealing with a strongly corroded socketed arrowhead. The blade's cross-section could be of considerable significance, and analysis of the photo provokes many doubts with regard to that. A darker line that can be seen along the longitudinal axis seems to suggest that this is a developed three- or four-bladed artefact. Therefore, a final identification can be speculative only, the more so that a precise chronology of the assemblage is unknown. On the other hand, the possibility of such weapons being utilized in the Roman Period is demonstrated by yet another example, in this case provoking no doubts. This is a stray find of a trilobate arrowhead from a stronghold in Dybowo, Olecko District, which can be connected with the Bogaczewo Culture settlement from the Roman Period (Fig. 2.26:B1). The habitation layers connected with that period were strongly disturbed, but the dating within this stratum can be tentatively limited to Phase B2/C1–C1a.[270] In this case the lobes are triangular, which implies that one is dealing with Sarmatian type arrowheads which are dated to the Roman Period.[271] Such arrowheads were also adopted by Roman troops,[272] and they can occasionally be found in the territory of the Przeworsk Culture at the very beginning of the Roman Period.[273]

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[259] Four artefacts are known from Mojtyny, Mrągowo District (former Moythienen, Kr. Sensburg), Grave 85 (Hollack and Peiser 1904, 54 pl. IX:59.d1–2, 4–5), while individual finds were unearthed at Spychówko, Grave 217 during the excavations of Hollack in 1902 (Voigtmann's heritage; Schmiedehelm's heritage 7.1.203, 7.8a.114, 7.13.34, 7.13b.90, 7.22a.833; inv. no. Prussia-Museum PM VII.573.13280; perhaps the same arrowhead was also discussed in the work of Gaerte 1929, fig. 149:a — cf. Fig. 5:1; this, however, is not completely clear due to certain differences in the shape, size, and the state of preservation of this artefact in comparison with a drawing from Voigtmann's heritage), from Grave 227 at this necropolis (Jahn's heritage; Schmiedehelm's heritage 7.13e.200; Voigtmann's heritage; Prussia-Archiv PM-A 1781.2.44; inv. no. Prussia-Museum PM VII.573.13280), as well as from Bogaczewo-Kula, stray find (Okulicz 1958, pl. XIII:5; the collection of the Museum of Warmia and Masuria in Olsztyn, inv. no. WMO 125).

[260] Ten artefacts from Grave 72 in Paprotki Kolonia, Giżycko District (Bitner-Wróblewska and others 2001, 69, 72, 80 fig. 8).

[261] Wólka, Pisz District (former Dietrichswalde, Kr. Johannisburg), Grave 10 (Tischler 1878, pl. IX:31; Jahn's heritage) and Zdory, Pisz District (former Sdorren, Kr. Johannisburg), stray find (Schmiedehelm's heritage 9.21.9; inv. no. Prussia-Museum PM III.233.1134).

[262] Jaskanis 2013, 87–88, 177 pl. CXLVI:2.3–5.

[263] Jaskanis 2013, 34 pl. XVIII:1.1.

[264] Cf. Jaskanis 2013, 69 pl. CIV:2. In theory, this artefact may have been used as a needle-like fire striker; however, another (bar-shaped) strike-a-light was found in the assemblage (see Jaskanis 2013, 69 pl. CIV:6). The latter was used for starting fire in a different manner, i.e. by means of striking against a flint nodule and not — as in the case of needle-like fire strikers — against a piece of quartzite (see Jonakowski 1996, 93–104). The presence of two strike-a-lights in one grave assemblage does not seem very probable.

[265] Kazakevičius 1988, 71–72; 1992, 98; 2004, 31; Luchtan 1997, 16–17; 2002, 24.

Nevertheless, there are no grounds now to assume that bows and arrows played a major role in the Balts' armament, at least in the Roman Period. Known kinds of arrowheads imply that straight bows were in use, together with arrows provided with leaf-bladed arrowheads. These were fastened both with the use of sockets and tangs. Such bows and arrows were mainly used for hunting. Effective deployment of longbows would require a task force of specialist troops who would be used tactically, e.g. in order to weaken the adversary's formation before the attack.[274] What is more, a centralized command would have been needed for the sake of coordination of various detachments' actions. This was possible in Scandinavia, where organized military structures existed,[275] but is rather dubious for the West Balt milieu. On the other hand, three-bladed arrowheads of nomadic type (and possibly also reflex bows) were undoubtedly effective in battle, with special reference to mounted combat. However, their extremely low number seems to imply that they were only sporadically used in the Roman Period.

Riding Gear

The role of horses in Balt funeral rites in the Roman Period was unique among the communities of Barbarian Europe, with the sole exception of nomadic peoples. Graves of horses, both accompanying deceased people and deposited separately, are known from various cultures of the West Balt milieu: the Bogaczewo Culture (with no connection to human burials), the Sudovian Culture,[276] the Dollkeim-Kovrovo Culture,[277] as well as from various cultural groups in the territory of present-day Lithuania. Numerous instances of horse burials can be also pointed out in the Migration Period — in the Olsztyn Group, in the Elbląg Group, as well as in the Sambian-Natangian territory,[278] and in current Lithuania.[279] The military significance of horses is also stressed by parts of horse tack that are found in grave inventories. These are mainly mouthpieces and headgear fittings.[280] Occasionally, there are also finds of saddles (see Szwajcaria, Barrow 2, Grave 1[281] in the Sudovian Culture (Fig. 4.16:36–37), as well as examples from the Dollkeim-Kovrovo Culture).[282] Particularly ornate examples of headgear can be seen in sets with chain reins (Fig. 4.37:14), particularly numerous in the Dollkeim-Kovrovo Culture,[283] although they are also known from other territories of Barbarian Europe.[284]

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[266] This cannot be said about the composite reflex bow that was used by nomads, as its manufacture required time and skill.

[267] Bitner-Wróblewska and Kontny 2006, 104–22, with further reading.

[268] Hollack and Peiser 1904, pl. VII:59a.

[269] Bitner-Wróblewska and others 2001, 80.

[270] Engel and others 2018, 279 fig. 5:5.

[271] Hazanov 1971, 35–40 pls XIX–XXII.

[272] Zanier 1988; 1995.

[273] Garbacz 1995; Kontny and others 2019, 376–79 fig. 11.

[274] Kontny 2008a, 127.

[275] Pauli Jensen 2009b, 126–30.

[276] Gręzak 2007, 353–67; Karczewska and others 2009.

[277] Zinoviev 2009; Skvortsov 2009; Skvorcov and Ûganov 2015.

[278] Kontny and others 2009.

[279] Bliujienė and Butkus 2009; Bliujienė and Steponaitis 2009.

[280] Nowakowski 2009; see also La Baume 1944, 2–19.

[281] Kontny 2013a, 138 fig. 3.

[282] Skvortsov 2009, 137; Skvorzov and Pesch 2011, 419–20. The list of Sambian saddles from the Roman Period must be completed with a discovery from Grave 10 in Kiselevka, Pravdinsk District (former Karschau, Kr. Friedland), where oblong saddle fittings were found (Jakobson's heritage — Karschau 001). These fittings were analogous to those discovered in Barrow 2 in Szwajcaria. Other finds included a headgear strap connector and, perhaps, fittings of the pommel. The latter were made from

However, the most numerous group of artefacts testifying to the use of horses are spurs.[285] These are known from the graves of the Bogaczewo and Dollkeim-Kovrovo Cultures, but also from the Sudovian Culture.[286] These artefacts were also encountered, although rarely, in the territory of present-day Lithuania.[287] The earliest bow spurs in the Bogaczewo Culture should be classified as Subgroup A according to Jerzy Ginalski (Fig. 4.38:1, see Fig. 2.23)[288] and dated to as early as the Late Pre-Roman Period.[289] A series of fourteen spurs of Subgroup C belongs to the Early Roman Period (Fig. 4.38:3–4),[290] while only four finds from Phase B2 (Fig. 4.38:6) can be classified as Subgroup D. The most numerous are spurs of Subgroup E (fifty-one finds) from Phases B2b–C1a (Fig. 4.38:7–12); they predominantly represent Variants Ginalski E1, E2, and E5. They are also known, although in lower numbers, from Sambian-Natangian territories, the Sudovian Culture, and current Lithuania.[291] Spurs of Subgroup F are represented by single artefacts from Phase C1, while finds of the same chronology belonging to Subgroup G1 were much more popular (Fig. 4.38:13, 15); the latter were generally not equipped with a hook-shaped terminal on the heel-band just beneath the goad, which was characteristic of analogous forms in the Przeworsk Culture. Regarding the Sudovian Culture, it is possible to point out five spurs of Subgroup F (Fig. 4.38:14) and six finds of Subgroup G (these are also dated to Phase C1). What is more, there are a few examples of spurs related to Type Leuna according to Ulrike Giesler (Fig. 4.38:16).[292] Such finds were also recorded in the Bogaczewo Culture (Fig. 4.38:17).

The relatively high popularity of hook-shaped terminals (German *Hakensporn*) and those with T-bar fastenings (German *Knebelsporn*) in the assemblage of Balt spurs from the currently Polish lands must be noted (Fig. 4.38:9). In almost every subgroup there are both the artefacts made of copper alloy and from iron, although the latter are considerably more numerous. Riveted chair-shaped spurs (German *Stuhlsporn*) from the Early Roman Period are extremely rare in the Bogaczewo Culture. Their absence in the Sudovian Culture results from its later chronology. It seems therefore that in the case of Bogaczewo Culture spurs it is possible to notice clear inspirations from the Przeworsk Culture. These can be perceived in the morphology of bow spurs, the rarity of chair-shaped artefacts (which are quite frequent in the Wielbark Culture), and the preference for iron as raw material. It is only in the late part of the Younger Roman Period when one may theoretically assume inspirations from the territory of the Wielbark Culture, where artefacts similar to Type Leuna appear. At present, however, it is difficult to determine this issue, as analogous solutions are also known from the territory of the Przeworsk Culture.[293] What is more, similar finds also occur in Balt territories in the Younger and Late Roman Periods and at the beginning of the Migration Period,[294] i.e. Roman riveted specimens of Type Leuna Variety D after Giesler,[295] local pieces made under the influence of Roman spurs (i.e. Variety Stręgiel derived from forms Ginalski G1), as well as Variety Leuna E, assumed to be Balt forms (Figs 2.24, 4.39:9–12).[296]

A stray brass spur has recently been found in the locality of Janówek, Augustów District. The find is close to Subgroup Ginalski E5, although it is ornamented with fields of red enamel (Fig. 4.40), dated most probably to Subphase C1a.[297] It can be classified as Variant IIIae according to Oleg Radyush.[298] Similar examples are first of all known from the territory of the Kyiv Culture, while finds from the territory of Lithuania, Belarus, and Crimea are sporadic. The cultural pertinence of this artefact is not obvious. The cultural situation in the vicinity of Augustów in the period in question was not clear, as in the Early Roman Period it was populated by the communities of the Bogaczewo Culture, and

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a double-folded ornamented metal sheet; the assemblage can be dated to Subphase C1b, on the basis of a bronze buckle of Type E13 (Madyda-Legutko 1986, table 9).

[283] Wilbers-Rost 1994, 18–21.

[284] Kontny and others 2016b, 250–56, with further reading.

[285] The issue of Balt spurs has been recently discussed (Smółka 2014, 60–61). However, the list of finds that this author dealt with is so strongly non-representative that conclusions cannot be considered credible, even bearing in mind their preliminary nature.

[286] Jaskanis 2013, 202–03; Kontny and Natuniewicz-Sekuła 2009.

[287] Michelbertas 2000.

[288] A cultural pertinence of a spur from Szurpiły (Fig. 4.38:2) is not obvious — Kontny 2007a, 99 fig. 13:e.

[289] Kontny 2007a, 97–99 fig. 13. Findings which are discussed below will be dealt with in a more comprehensive manner in a separate publication, cf. Kontny in preparation b.

[290] It is necessary to mention forms that are inspired by the Variety Ginalski C1 but differing in their distinct goad bases, which were often decorated and made from iron in contrast to copper-alloy heel bands. They are distinguished as Type C3 (Fig. 4.38:5), cf. Kontny in preparation b.

[291] Kontny and Lewoc 2018.

[292] Giesler 1978, 5–56.

[293] Kontny and Natuniewicz-Sekuła 2013, 14, 16, 18, 20 pls IV–V.

[294] Kontny and Natuniewicz-Sekuła 2009.

[295] Giesler 1978.

[296] Kontny and Michalak 2021.

[297] Kontny and Lewoc 2018.

[298] Radyush 2013.

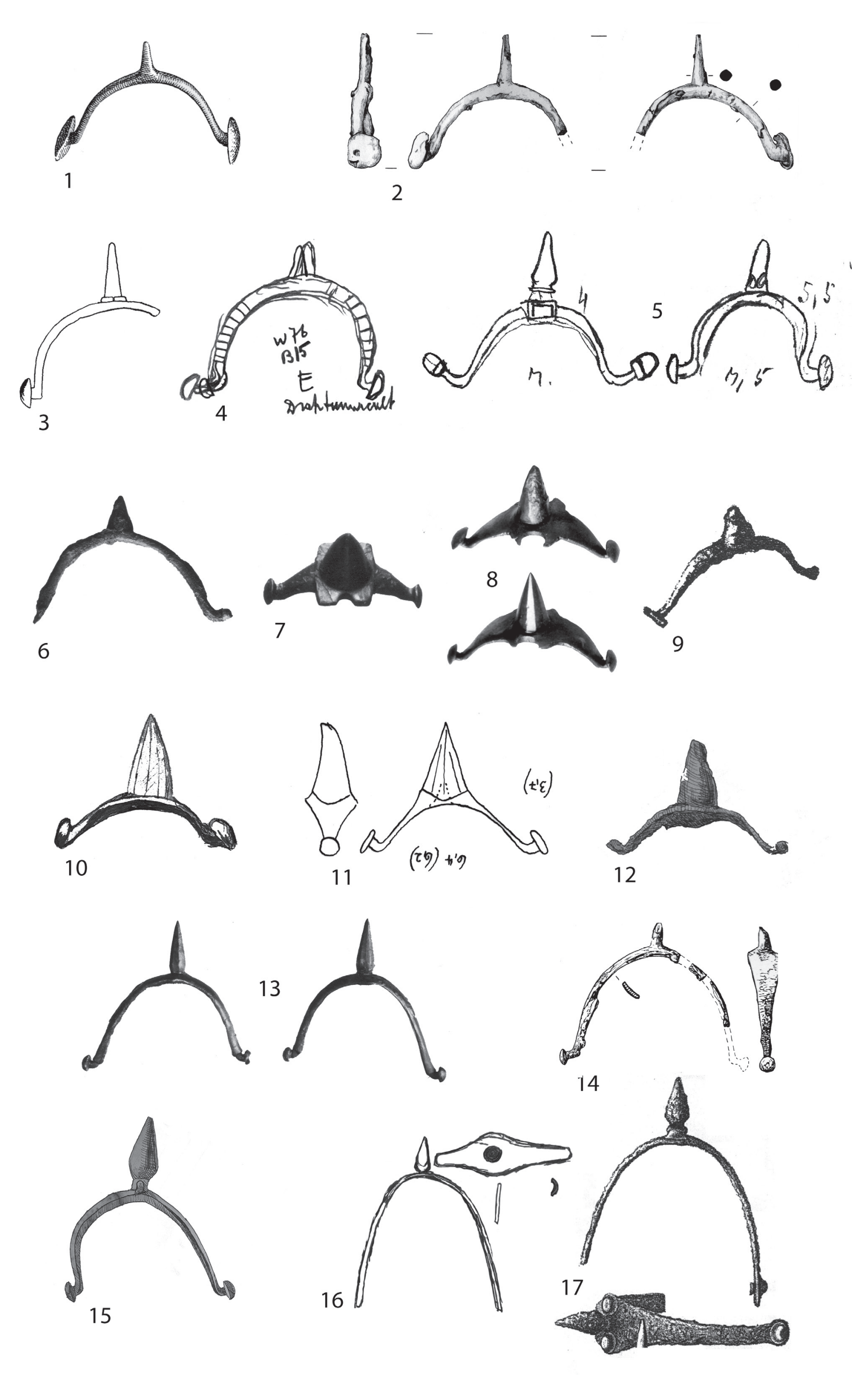

Figure 4.38. Balt spurs from the current Polish lands: 1 — Koczek II, Grave 101 (Type Ginalski A), 2 — Szurpiły, Site III, Feature 68 (Type Ginalski A), 3 — Trygort (local variant Ginalski C4), 4 — Stara Rudówka, Grave 161b (Type Ginalski C1), 5 — Muntowo, Grave 52 (Type Ginalski C1 – right, and local variant Ginalski C3 – left), 6 — Romoty, Grave 72 (Type Ginalski D), 7 — Skomack, Grave 35 (Type Ginalski E1), 8 — Dłużec, Grave 140 (Type Ginalski E1), 9 — Bartlikowo, Grave 33 (Type Ginalski E2, *Knebelsporn*), 10 — Bogaczewo-Kula, Grave 245 (Type Ginalski E5), 11 — Machary, Grave 109 (Type Ginalski E2), 12 — Babięta, Grave 71 (Type Ginalski E5), 13 — Machary, Grave 187 (Type Ginalski F3), 14 — Żywa Woda, Barrow 9 (Type Ginalski F3), 15 — Babięta, Grave 305 (Type Ginalski G1), 16 — Boćwinka, Grave 9a (riveted spur, inspired with Type Ginalski G), 17 — Stręgiel II, Grave 4 (riveted spur variant Stręgiel, inspired with Type Ginalski G) (1–2 — after Kontny 2007a, fig. 13; 3 – after Jankuhn's heritage – Nowakowski 2013, pl. 59:1; 4 — after Jakobson's heritage – Rudowken 001; 5 — after Jahn's heritage; 6 — after Juga and others 2003, fig. 4230:e; 7 — after PM-F 2501; 8 — Engel's heritage, after Grenz's heritage; 9 — after Kemke 1900, pl. III.8; 10 — after Jahn's heritage; 11 – Jankuhn's heritage, after Grenz's heritage; 12, 15 — after Bitner-Wróblewska 2008a, pls LXXVII, C; 13 — after PM-F 2514; 14 — after Ziemlińska-Odojowa 1961a, pl. XII:4; 16 — after Jakobson's heritage — Alt Bodschwingken 026; 17 — after Tischler and Kemke 1902, pl. XVI:11).

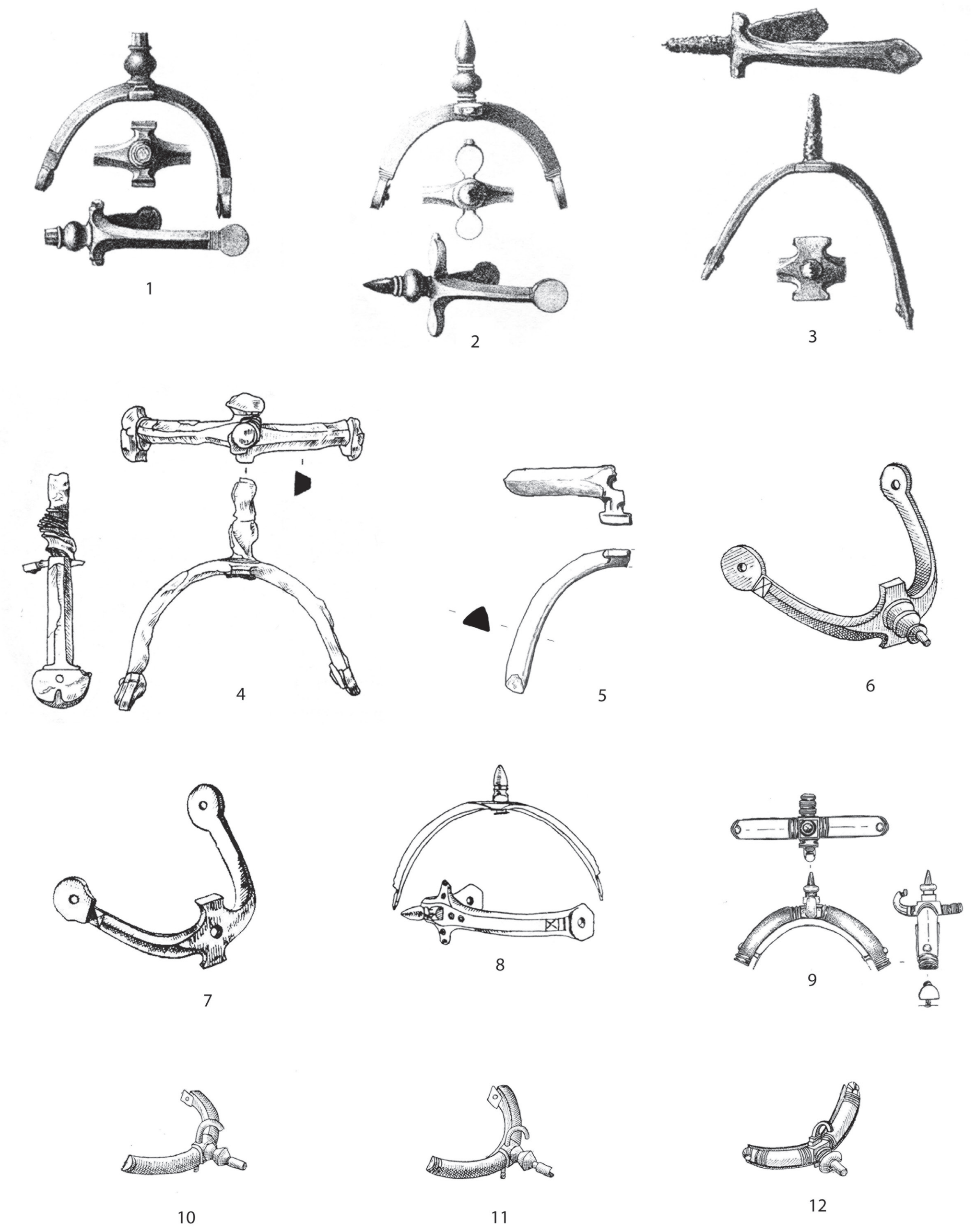

Figure 4.39. Sambian (1–8) and Leuna E (9–12) Type spurs from the West Balt Circle: the Dollkeim-Kovrovo Culture (1–5), Central Lithuanian Group (6–7, 10–12), Elbląg Group (8), and East Lithuanian Barrow Culture (9). 1 — Lûblino (former Serappen), Grave 13; 2 — Pervomajskoe (former Warnikam), Grave 31; 3 — Pervomajskoe, Grave 59; 4 — Kovrovo (former Dollkeim) Grave 370; 5 — Povarovka (former Grebieten), Grave 108 in the S part of the necropolis; 6–7 — Plinkaigalis, Grave 50; 8 — Myślęcin (former Meislatein), stray find; 9 — Taurapilis, Barrow 5; 10, 11 — Plinkaigalis, Grave 65; 12 — Plinkaigalis, Grave 332 (1–3 — after Tischler and Kemke 1902, pl. XVII:3, 4, 6; 4 — after Kulakov 2009, fig. 209; 5 — drawn by Bartosz Kontny; 6–7, 10–12 — after Kazakevičius 1993, figs 136:2, 4, 5; 137:12; 8 — after Kontny and Natuniewicz-Sekuła 2009, fig. 1.1 with further reading; 9 — after Bliujienė and Steponaitis 2009, fig. 10:1).

Sudovian Culture settlements appeared there in later times. The discussed find should therefore be linked to a turbulent period of cultural change, which may have been accompanied by population migrations.

The above observations imply that the horse played a significant role in the Balt societies, and its coincidence with weapons demonstrates that this animal was used for military purposes. There is no doubt that some kind of symbolism was related to it, and that it was to a great degree linked to the warrior world. However, its details are not clear, and one can only make suppositions about it on the basis of later narratives which concern early medieval Prussians.[299] Nowakowski assumed that Balt weaponry was typical of infantry, which could also be implied by the size and shape of shields, unsuitable for mounted combat.[300] Such an opinion does not seem fully justified concerning the other part of the hypothesis — elongated shields did not exclude use in mounted combat, as they effectively protected the side of the horseman, especially the thigh that was particularly exposed to strikes.[301] The vertical position of the shield grip facilitated control of the horse with reins held with the left hand, together with the shield.[302] Taking into consideration what is known about the Germanic peoples, it can be assumed that the Balts were also using horses for harassing the adversary in plundering operations carried out by retinues.[303] The use of horses in regular battles (which were perhaps not that numerous) required well-developed tactics and there are no traces of this in available sources concerning the Balts in the proto-historic period. It is certain that the horse was used as a means of transport, which also stressed the position of the owner. What is more, due to their speed horses were excellent in case of chase or flight. Furthermore, the horse's mobility allowed for surprise attacks, of crucial importance in harassing and plundering operations.[304] The horse's back could also temporarily accommodate a comrade-in-arms fighting on foot (retinues were composed of infantrymen and horsemen, the latter being of higher social status) in order to take him to safety. This was of course possible provided that a blanket or a set of stuffed cushions were placed on the horseback, and not a saddle with developed pommels and cantles.[305]

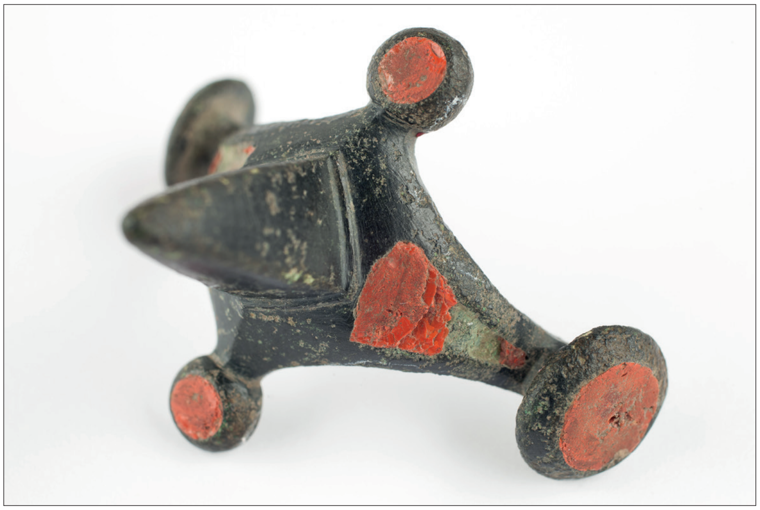

Figure 4.40. Spur discovered in the locality of Janówek (photo Miron Bogacki, published with permission).

The Migration Period

The Migration Period is a time of very profound settlement changes in the current Polish lands. These changes resulted in the abandonment of Wielbark, Przeworsk, and Luboszyce Culture settlements, which is believed to have been related to population migrations to the south and the west.[306] We now know that post-Germanic enclaves survived (e.g. in Cuiavia), and these might have been reinforced by groups of newcomers. However, a general settlement crisis, which is confirmed by palynological analyses, is beyond doubt.[307] These transformations also encompassed the territories of north-eastern Poland, although to a much lesser degree (Fig. 4.41). The Sudovian Culture existed until the advanced Migration Period (the so-called Prudziszki Phase, which is notable in the Suwałki region), but in a transformed shape. Previous grave forms were replaced with multiple burial barrows which contained solely cremation burials, in general, poorly furnished. The so-called Gołdap Group is an exception, as the habit of relatively rich grave furnishings survived there. Regrettably, weapons were not present among grave goods.[308] The Olsztyn Group formed in the previous territory of the Bogaczewo Culture at the beginning of the Late Migration Period. In this group, weapons are rarely found, although its funeral rites included

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[299] Kontny and others 2009, n. 19.

[300] Nowakowski 2009, 177.

[301] Kontny 2008b, 188–89.

[302] Kontny and Rudnicki 2009, 38.

[303] Kontny 2009, 100–01.

[304] Kontny 2003b.

[305] The earliest saddles in the central and north European *Barbaricum* should be dated to the Younger Roman Period, namely Scandinavian Subphase C1b, i.e. *c.* AD 200, and their mixed Sarmatian/Roman origin is plausible; see Kontny 2013a, 138; Skvortsov 2009, 137; Näsman 2017, 175–76, 184.

[306] Mączyńska 1999; 2009b, with further reading.

[307] Pędziszewska and others 2020, 192–94, 196–98.

[308] Szymański 2013, 68–75.

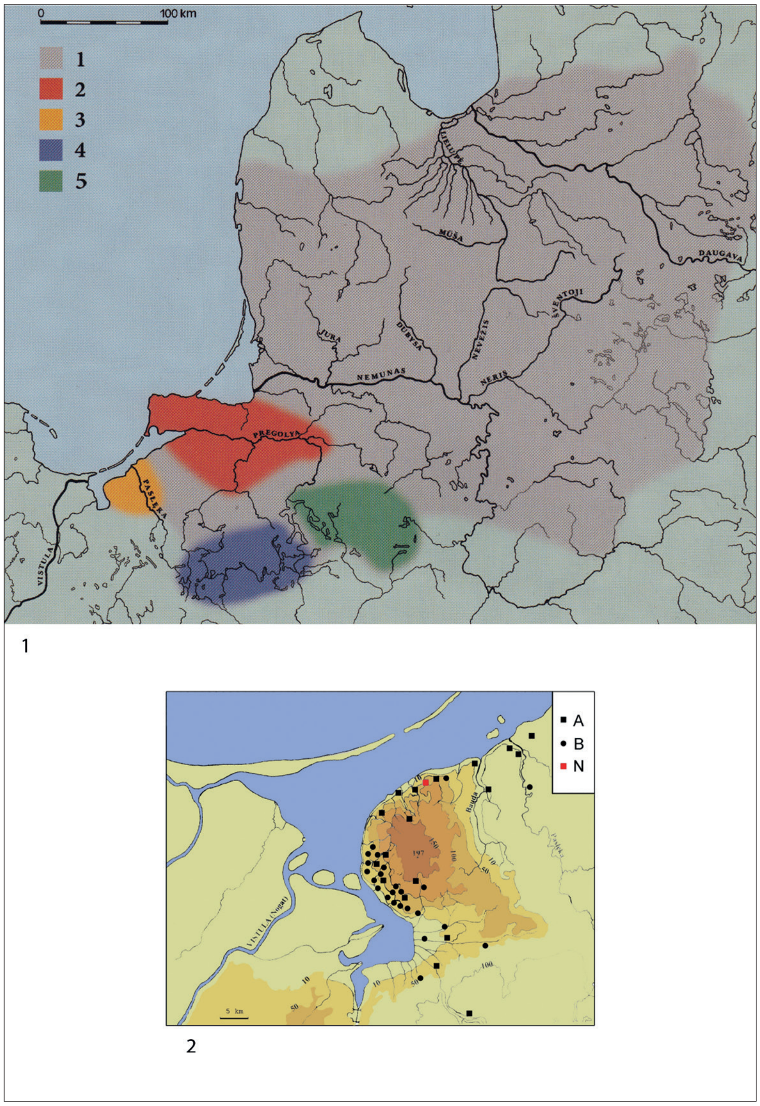

Figure 4.41. West Balt milieu in the Late Migration Period (1) and sites of the Elbląg Group (2). 1.1 — maximum extent, 1.2 — Dollkeim-Kovrovo Culture (Sambian-Natangian), 1.3 — Elbląg Group, 1.4 — Olsztyn Group, 1.5 — Sudovian Culture, 2A — burial grounds, 2B — settlements, 2N — necropolis in Nowinka (after Kontny 2013c, fig. 1, with further reading).

relatively rich grave goods.[309] One must also mention a settlement cluster known as the Bartian Group (German *Bartener Gruppe*),[310] which evidences Balt expansion from the Sambian Peninsula to the south. During the Migration Period there are clearer references to Sambian-Natangian finds than to Olsztyn Group artefacts in this territory, but weapons have not been found there so far. The Elbląg Group is a new unit and its origin should be related to population migrations from Sambian-Natangian territories along the coast of the Vistula Lagoon to the Elbląg Heights. Balt incomers probably reached this area in two large waves and mixed with what remained of former post-Wielbark Culture communities, but perhaps also with migrants who arrived there from the west. This can be inferred from the distribution patterns of characteristic finds. Imports from Scandinavia, although present, seem to suggest vivid contacts and not population translocations.

This 'cultural blending' perfectly matches the narrative of Jordanes, who located a people of Vidivarii on an island called Gepeidos (identified with the territory of the Elbląg Heights) in the sixth century. In his account he writes:

> Ad litus autem Oceani, ubi tribus faucibus fluenta Vistulae fluminis ebibuntur, Vidivarii resident ex diversis nationibus agregati.
>
> (On the shore of Ocean, where the floods of the River Vistula empty from three mouths, the Vidivarii dwell, a people gathered out of various tribes).[311]

In another place (*Getica*, XVII. 96) he stated:

> Hi ergo Gepidae [...], dum Spesis provincia commanerent in insulam Visclae amnis vadibus circumactam, quam patrio sermone dicebant Gepedoios. Nunc [that is, perhaps in the early sixth century] ut fertur insulam eam [i.e. Gepedoios] gens Vividarii incolit [...] qui Vividarii ex diversis nationibus ac si in unum asylum collecti sunt et gentem fecisse noscantur.
>
> (These Gepidae [...] dwelt in the province of Spesis on an island surrounded by the shallow waters of the Vistula. This island they called, in the speech of their fathers, Gepedoios; but it is now inhabited by the race of the Vividarii, since the Gepidae themselves have moved to better lands. The Vividarii are gathered from various races into this one asylum, if I may call it so, and thus they form a (new) nation.)[312]

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[309] The nature of the change is a matter of debate. Arguments for a settlement hiatus in the Early Migration Period are put forward (Nowakowski 2000, 168–80). On the other hand, premises suggesting an uninterrupted duration of the previous settlement are evocated. It is supposed that a change in burial rites might have taken place. As a result, grave features became imperceptible for archaeology (Bitner-Wróblewska 2000). I personally prefer the other concept, which is also supported, i.e. by some finds from the bog site in Czaszkowo.

[310] Engel and La Baume 1937, 145, 146, 181, 262 maps 24, 29, 30; Kontny and Szymański 2015, 339–40.

[311] Jordanes, *Getica*, V. 36.

[312] See Kolendo 2009, 30–32.

In the Elbląg Group weapons are known from the earliest assemblages related to the migration from the north-east ('pure' Balt assemblages from as early as the Early Migration Period and the turn of the Early and Late Migration Period). Then, for many years weapons were not deposited into graves, which can be explained by the influence of Wielbark Culture traditions (the local cultural substratum). Weaponry appears again in the third phase of the Elbląg Group's development, i.e. in the late part of the sixth and at the beginning of the seventh centuries.[313]

The Elbląg Group

It is actually weapons of the Elbląg Group that are the most examined among those from the Migration Period Balt cultural units known from the current Polish lands. Concerning the earliest phase (Horizon 0, dated to the Early Migration Period) related to migrations of Balt people from the Sambian-Natangian territories along the coast of the Vistula Lagoon, there are individual examples of the aforementioned *Dolchmessern* and (perhaps) — single-edged weapons, that is Balt saxes which originated as a result of the development of these dagger-knives. The earliest swords had remarkable narrow points and parallel grooves-fullers below the back of the blade. Thus, these were actually dagger-knives that were enlarged to the size of swords.[314]

In the necropolis in Podgórze, Braniewo District (former Huntenberg, Kr. Braunsberg), where typically Balt traits were discovered (such as horse burials: Graves 1, 10, 11, 47, and 48),[315] weapons were also found. These can in all probability be dated to Phase D. A shafted weapon head, perhaps of Type II or IB (IБ) according to Vytautas Kazakevičius was discovered in Grave 2.[316] Furthermore, in Grave 5 from Phase D or the turn of the Early and Late Migration Period there were, e.g. an arrowhead (possibly leaf-shaped, 11.5 cm long, with a socket) and a 30 cm long *Dolchmesser*.[317] A shield grip with a straight handle and small circular rivet plates was found in Grave 40 from Phase D (Fig. 4.42). At present, no close analogies to this artefact are known.[318] A sax fragment was also discovered in the Balt cemetery in Pasłęk, Elbląg District (former Preußisch Holland, Kr. Preußisch Holland) in Grave 26. It was accompanied

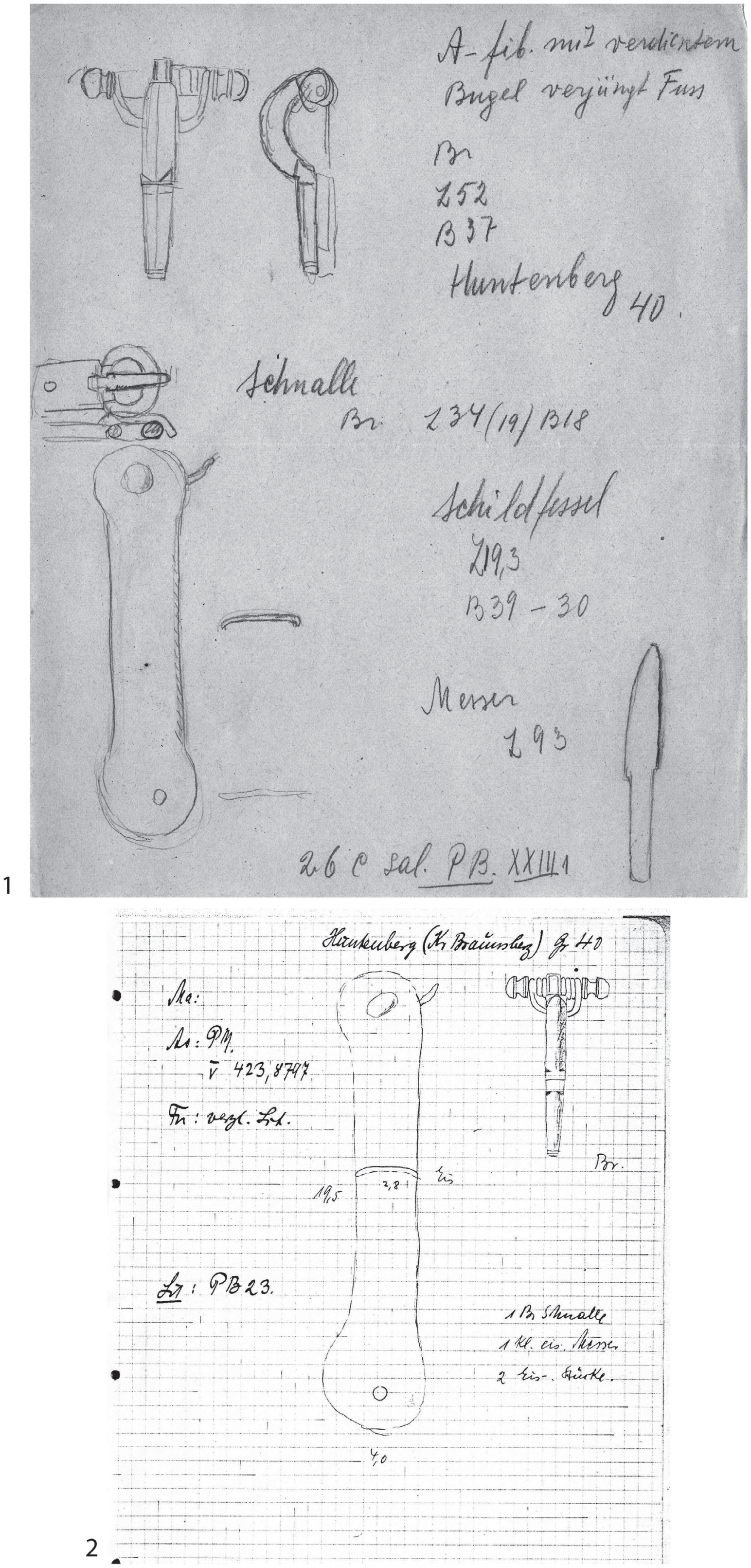

Figure 4.42. Furnishings of Grave 40 from Podgórze (1 — after Jakobson's heritage; 2 — after Jankuhn's heritage; after Kontny 2020, fig. 20.17).

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[313] Kontny 2012, 60–76; 2020, 685, 687–88, with further reading.

[314] Kontny 2013c, 221–23.

[315] Peiser 1919c, 336, 339, 350, 356; Kontny 2020, 683–85.

[316] Kontny 2020, 383, 385; cf. Peiser 1919c, 336–37.

[317] Peiser 1919c, 337–38.

[318] Peiser 1919c, 348–49; Jakobson's heritage — Huntenberg 002; Jankuhn's heritage; Cieśliński and Nowakowski 2005, 262 pl. 1:2–5.

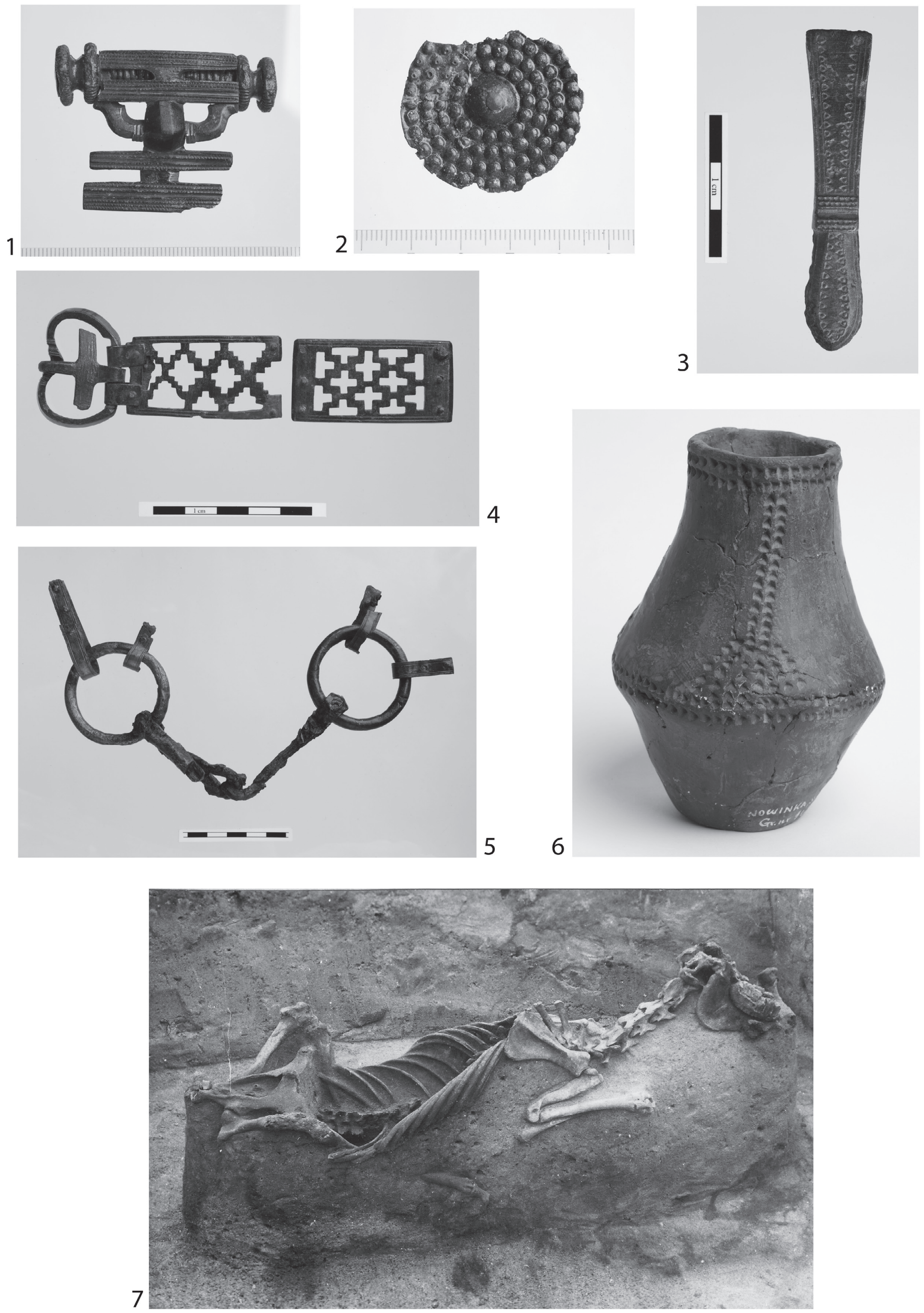

Figure 4.43. Characteristic cultural traits of the Elbląg Group in the necropolis in Nowinka. 1 — rung fibula, 2 — shield brooch, 3 — lancet-shaped strap end, 4 — buckle with a cross-shaped tongue and openwork belt plates, 5 — bit with copper-alloy rings, 6 — clay flask, 7 — horse burial (photo Miron Bogacki and Michał Dąbski, after Kontny and others 2011d, pls CVI:3, CIX:5, CXIII:3).

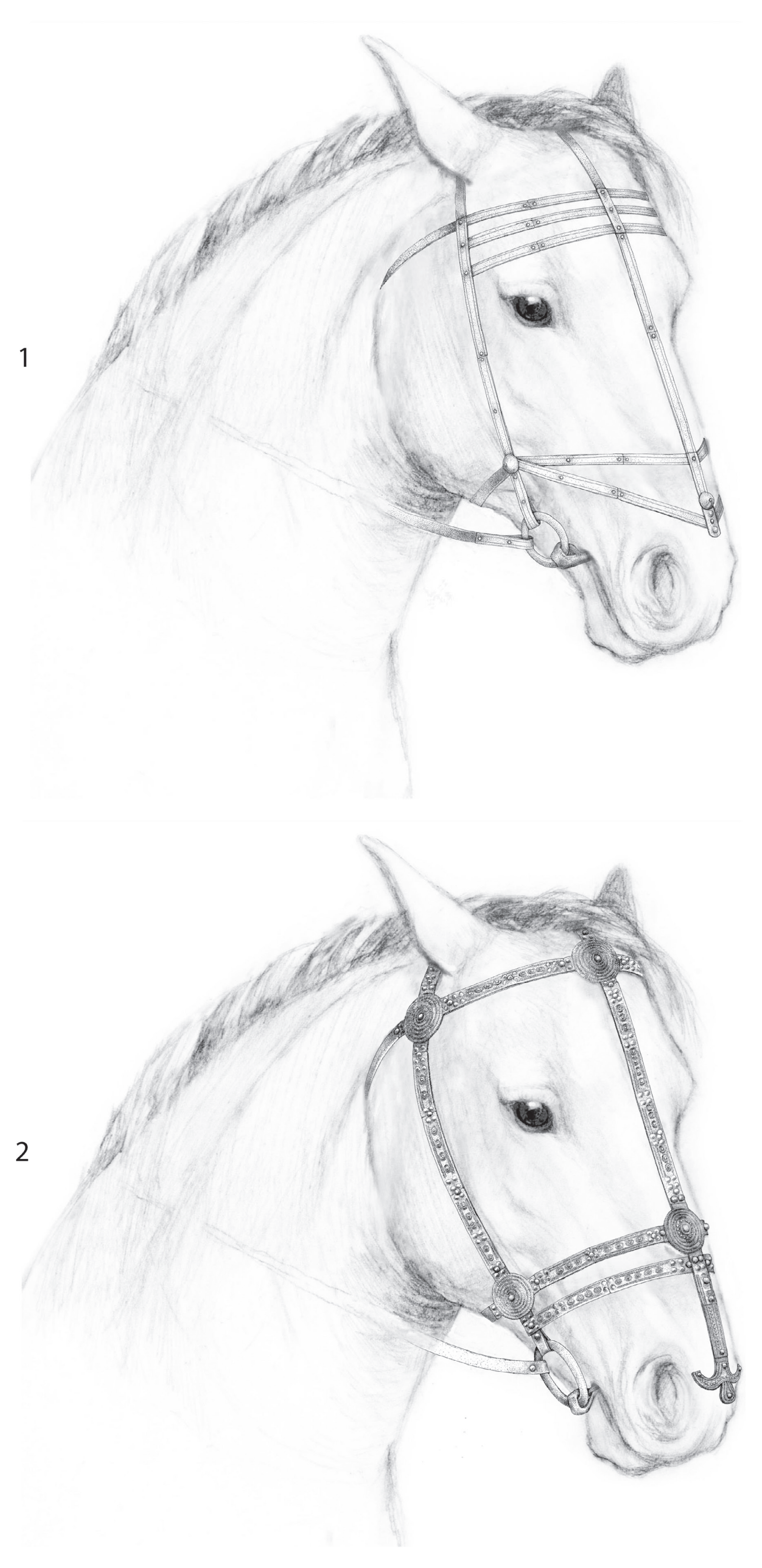

Figure 4.44. Reconstruction of horse headgear from Graves 78 (1) and 118 (2) from the Elbląg Group cemetery in Nowinka (after Kontny and others 2011d, pl. CXIV).

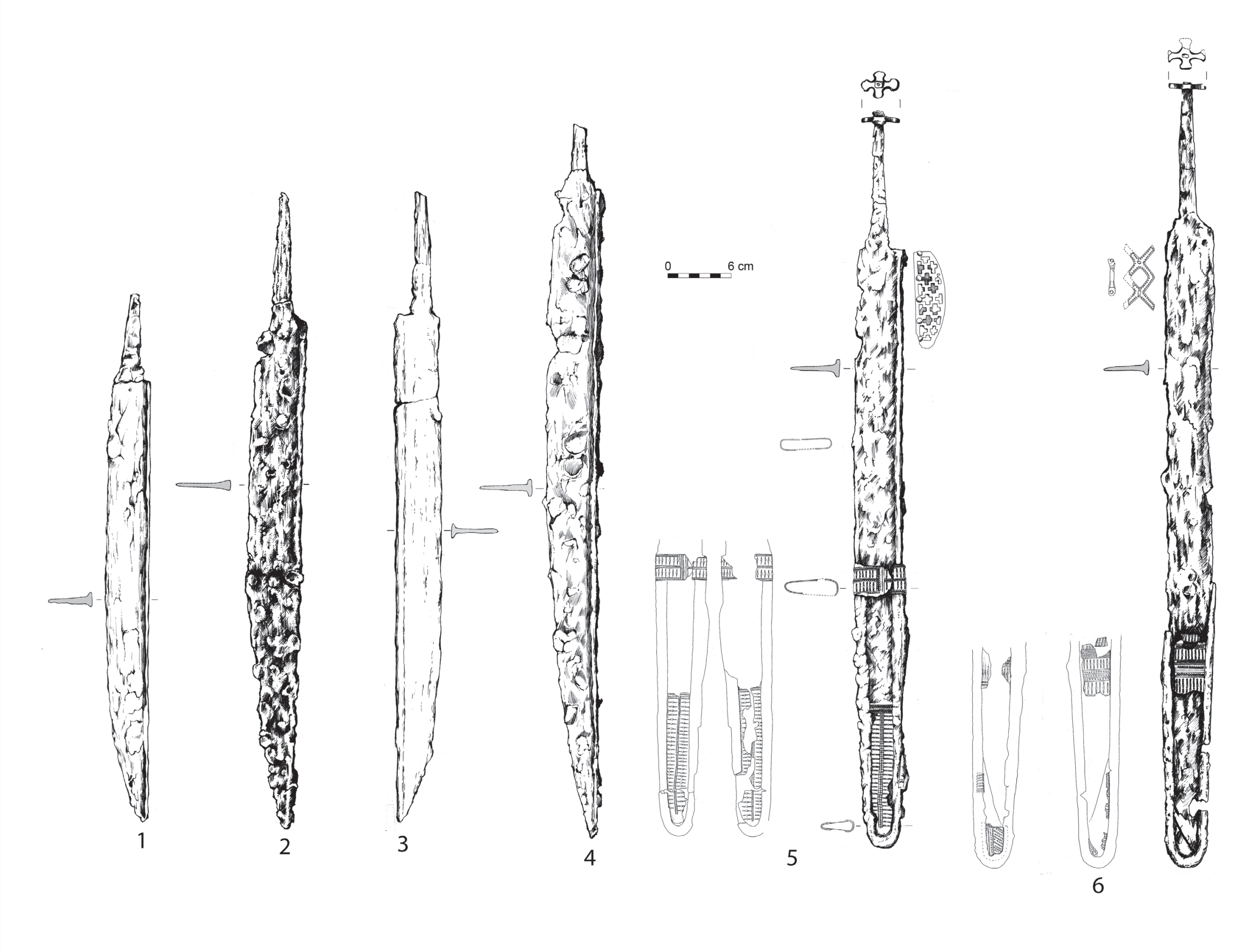

Figure 4.45. Balt saxes from Graves 105 (1), 60 (2), 21 (3), 84 (4), 85 (5), and 17 (6) from the Elbląg Group necropolis in Nowinka (after Kontny 2013c, fig. 4).

by, among other things, a shafted weapon head. Other saxes, with grooves below the back, were supposedly located in the space between graves.[319] If these were in fact swords and not dagger-knives, they should be dated to the beginning of the Late Migration Period (Phase E1), as single-edged swords with archaic construction traits were in use in this period.[320]

What can be also mentioned is a find of a shafted weapon head from Młoteczno, Braniewo District.[321] However, this artefact comes from an assemblage that was not professionally excavated, which is why its early chronology (Phase C3) cannot be considered certain.[322] A Sambian type spur (Fig. 4.39:8), related to Type Leuna, that was found in Myślęcin, Elbląg District (former Meislatein, Kr. Elbing), should perhaps be linked to the period of Balt migrations in Phase D, but one also has to keep in mind previous influences of the Roman military (through Barbarian warriors who encountered the Roman army, including those serving in the imperial garrisons).[323]

The later period of development of the Elbląg Group is remarkable for a completely 'non-Sambian' absence of weapons in graves. This is in spite of the fact that burial rites demonstrate evident Sambian-Natangian

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[319] Ehrlich 1923, 199.

[320] Kontny 2013c, 222–23, with further reading.

[321] Ziemlińska-Odojowa 1991, fig. 5. In this necropolis it is possible to point out earlier assemblages related to the Wielbark Culture, as well as later ones with Balt traits.

[322] For a detailed discussion on the chronology of assemblages from Podgórze, Pasłęk, and Młoteczno see Kontny 2020, 683–86 figs 20.16, 20.17.

[323] Kontny and Natuniewicz-Sekuła 2009, 153–57 fig. 1:1; Kontny and Michalak 2021, 507, 509 figs 6, 8.

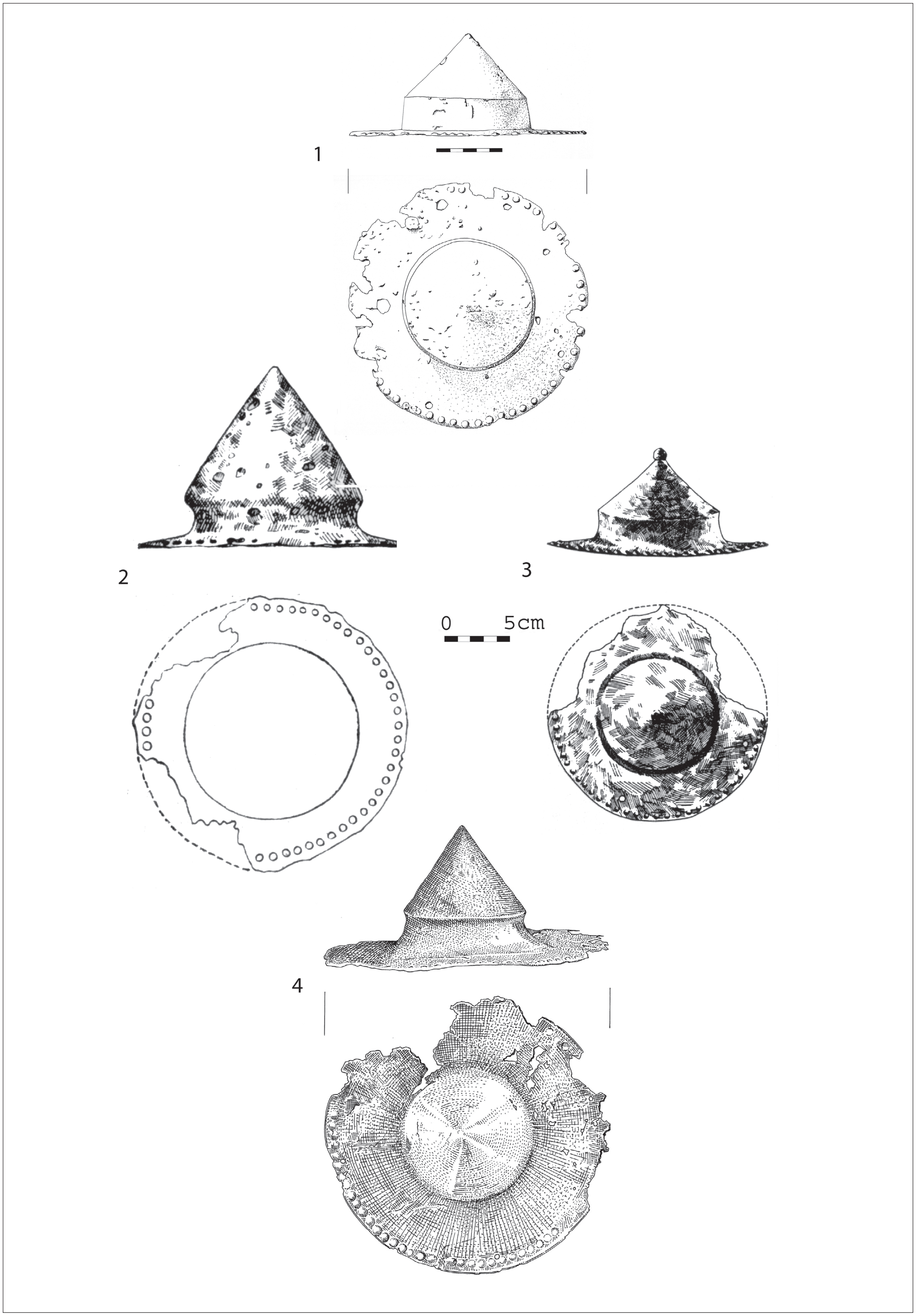

Figure 4.46. Migration Period shield bosses from the East Lithuanian Barrow Culture, decorated with bead ornament. 1 — Słobódka (perhaps Belarus); 2–3 — Krikštonys, Lazdijaj District; 4 — Smorgonie, Smargon' District (1–3 — after Kontny 2004b, figs 1:1, 4:1–2; 4 — after Demidziuk and Kontny 2009, fig. 31:a).

traits, that is cremation and deposition of the body remains together with grave goods (usually not burnt) into pits, often above non-cremated horse skeletons (Fig. 4.43:7). In many cases burials were covered with stone paving.[324] The role of the horse was manifested with rich ornaments of horse headgear that were deposited together with these animals (Fig. 4.44). The same applies to saddles and bits, including decorative ones with copper-alloy rings (Fig. 4.43:5).[325] Weapons begin to appear again in graves as late as the final stage of development of this cultural unit, i.e. in Phase E3, dated here to the late part of the sixth and the beginning of the seventh centuries (Phase 3 of the necropolis in Nowinka, Elbląg District). Weapons are also known from the burial grounds in Nowinka, Łęcze, Elbląg District (former Silberberg bei Lentzen, Kr. Elbing) or Elbląg-Żytno (former Benkenstein-Freiwalde, Kr. Elbing).[326] Their re-emergence in grave inventories can be explained by the arrival of another wave of Balt populations. Single-edged swords that can be found there bear little resemblance to dagger-knives (Fig. 4.45). As a matter of fact, the only anachronistic trait is the presence of thickened backs, which make blades T-shaped in cross-section. This part increased the stiffness of the blade and the impact of the stroke. Such swords were between 50 and more than 70 cm long and were used both for cutting and thrusting (their points were clearly pronounced).

This typically Balt and native form of weapon appeared there earlier than in the north European or Merovingian milieu and originated from different traditions. Swords were suspended at the warrior's side, using a single- or double-point way of fastening the scabbard. Scabbards were reinforced with gutter-like fittings of edges, and some were ornamented with copper alloy or even silver sheets, adorned with embossed decorations. Such weapons had analogies in other Balt cultures, especially in the Sambian-Natangian territory.[327] What is more, in Elbląg Group necropoleis, in assemblages from the later part of Phase E, there were numerous shafted weapon heads that fit within the Balt typological scheme proposed by Kazakevičius. Ornamental rings of incised bronze wire were put on shafts of some weapons.[328] Furthermore, small spurs that were composed of riveted rectangular and arcuately bent metal sheets are also known from the Elbląg Group. They have analogies in the Balt milieu, which were first of all recorded in Phase E2.[329] Regrettably, apart from the aforementioned shield grip from Pogórze, no shield parts are known. This does not necessarily mean that shields were fully made of organic materials and decomposed after the deposition into graves; it seems more probable that the dead were not provided with shields at all. If it had been otherwise, large and regular soil discolourations would have possibly attracted the attention of archaeologists. What shields may have been used by 'Vidivarii' warriors? This question also applies to combatants from the Sudovian Culture and the Olsztyn Group. It is possible to refer to similar findings in other territories of the West Balt milieu, with special reference to the current Lithuanian and Sambian-Natangian lands. Therefore, it seems probable that the Elbląg Group population used shields with conical shield bosses on cylindrical walls, with wide flanges which were sometimes ornamented with embossed pearl patterns (Fig. 4.46). Such artefacts belonged to Type Kiulkys VD, or possibly VE (with slightly concave walls), or VF (similar, but larger).[330] Regrettably, there are no grounds upon which to draw conclusions on the shapes, construction, and sizes of these shields.

An iron helmet is known from the period in which there are no weapons in graves in the territory of the Elbląg Group. It was found in a non-sepulchral context, in the locality of Piekło, Sztum District (former Pieckel, Kr. Marienburg) during dredging works in the Vistula River in 1908. Thus, it was discovered beyond the compact extent of the discussed cultural unit. The find became part of the arms and armour collection at the Castle of the Teutonic Order in Malbork, but it went missing during the Second World War and its proper identification is no longer possible.

In a source work there is a piece of information that the helmet had an analogy in a find from a grave in Bretzenheim (now Mainz administrative district, Rhineland-Palatinate).[331] The latter (Fig. 4.48) belongs to a significant group of segmented helmets (German: *Spangenhelme*) which were very popular in the Merovingian milieu. However, it is not absolutely certain that it is in fact a typologically parallel find. This is due to the fact that the Bretzenheim discovery was made in the same year (1908), meaning that an association of such chronologically close discoveries was somewhat natural. Furthermore, at that time knowledge about the diversification of the helmet forms was not very advanced. However, if one assumes that both finds are similar with regard to their morphology, the discovery from Piekło should be classified as a particular type of *Spangenhelm* that would fit within the group of the band helmets (German *Bandhelme*), though as an atypical form.[332] This assemblage group is to be dated to the earliest part of the Merovingian Period, i.e. the years 480–500.[333] This was the time of the Elbląg Group formation.[334] As band helmets were widespread upon the Rhine, the Lower Danube, and in Dalmatia,[335] the find should perhaps be linked with the Germanic cultural substratum (not necessarily a post-Wielbark Culture one) which was one of the components of the Elbląg Group. Deposition of helmets into rivers is also evidenced in the Merovingian milieu, especially in Burgundy.[336] Therefore, this could be yet another premise to consider a non-Wielbark Culture Germanic factor in the origin of the Elbląg Group. However, there are no grounds so far to assume that helmets of this kind were widely in use on the right bank of the Lower Vistula.

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[324] Kontny and others 2011a.

[325] Kontny and others 2011b, 100–07.

[326] Kontny 2011, 89; Kontny 2013c, 222.

[327] Kontny 2013c, 219–28, with further reading.

[328] Kontny 2011, 94–95.

[329] Kontny 2011, 95–97.

[330] See Demidziuk and Kontny 2009, 164–66; Kiulkys 2010, 58–70, 93 fig. 32 (in my opinion late dating of other types from the current territory of Lithuania is not reliable, due to the absence of a precise chronological analysis).

[331] Petersen 1939, 35, 211.

Arrowheads have not yet been discovered in the territory associated with the Elbląg Group, save the leaf-shaped find from Podgórze. However, it was once proposed that stray finds of metal sheets from Elbląg-Żytno discovered in 1928 (five fragments of silver metal sheet of various sizes with a scale motif) had been used as quiver fittings. The author of the publication excluded the possibility that these were scabbard fittings, as their convexity supposedly implied that they originally covered an ovoid surface.[337] However, it seems much more probable that these finds are fittings of a drinking horn.[338] Therefore, the role of bows and arrows is not clear. It can only be hypothetically assumed that such weapons were mainly used for hunting purposes, as implied by the arrowhead from Podgórze.

The Olsztyn Group

Archaeological finds from the territory of the Olsztyn Group provide much less data on weaponry. Numerous spurs are evidenced there, including riveted ones analogous to those from the Elbląg Group,[339] as well as bow spurs with hook-shaped terminals (bent outside) dated to Phases E2 and E3, i.e. until the end of the seventh century.[340] Furthermore, the use of spurs with hook-shaped terminals that are bent inside was evidenced as well. Such finds are dated to the final period of the Olsztyn Group's existence, that is to the second half of the seventh or the early eighth century.[341] Spur finds stress the role of horses, which is also strongly manifested by horse inhumation burials. These were also furnished — apart from horse headgear and bits,[342] as it was in the Elbląg Group — with shears. On the other hand, weapons are almost completely absent from human cremation graves.[343]

A shafted weapon head from Grave 120 in Tumiany, Olsztyn District (former Daumen, Kr. Allenstein) is an exception (Fig. 4.47:1).[344] However, it is impossible to precisely identify its chronology, as it is not accompanied by other grave goods. What is more, a typological classification of this find is also difficult. It has no good analogies either among Scandinavian finds[345] or in the classification proposed by Kazakevičius. One can consider if it might be an isolated Roman Period grave, as the artefact matches criteria of Type XV according to Kaczanowski, both concerning its proportions and its exceptional size (more than 40 cm in length). If this is the case, the find should be dated to Phase C1[346] and linked with the Wielbark Culture. In any case, it is difficult to determine this issue, bearing in mind that weapons are exceptionally rare in the Wielbark Culture. Furthermore, the find comes from a borderland, so perhaps the assemblage should be related to the Bogaczewo Culture.[347] In the Younger Roman Period sites of this culture used to be located at a relatively short distance to the east of Tumiany. What speaks for the survival of Wielbark Culture remains in this region is the discovery of a caterpillar brooch from Phases C3–D in Tumiany, in a settlement near the burial ground. Additionally, a number of other probably Wielbark Culture finds are known in the vicinity.[348] Finally, I tend to link this artefact with the late, i.e. non-Roman Period spearheads, as it has wide lower sides of the blade, not narrowed at the edges. Such a solution made the blade more durable, but it

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[332] Vogt 2006, 283–84 fig. 107.

[333] Wunsch 2006, 3–27.

[334] Previous attempts at classifying this helmet as a Frankish import or its dating to the sixth century were not preceded by comprehensive analyses and they must be considered erroneous (see Jagodziński 1997, 148; Bogucki 2013, 91).

[335] Vogt 2006, fig. 38.

[336] Vogt 2006, 61, 177–78.

[337] Ehrlich 1920, 26 fig. 9; 1932, fig. 4.

[338] Kontny and others 2011c, 111.

[339] Kontny 2011, 96–97.

[340] Rudnicki 2006, 349–57, figs 4–5.

[341] Nowakowski 2004, 412–13 fig. 4.

[342] Kontny and others 2011b, 100–03.

[343] This is a piece of evidence for settlement continuity since the Roman Period, as weapons in the Bogaczewo Culture ceased to be deposited into graves as early as the late part of the Younger Roman Period.

[344] Jakobson 2009, 57 pl. 69:120a.

[345] Nørgård Jørgensen 1999, 88–100.

[346] See Kaczanowski 1995, 23 table 1, pl. XII:3–4.

[347] Cf. the extent of the Wielbark Culture settlement in the Younger Roman Period — Cieśliński 2010, maps 4–5.

[348] Cieśliński and Wyczółkowski 2008, 179–84.

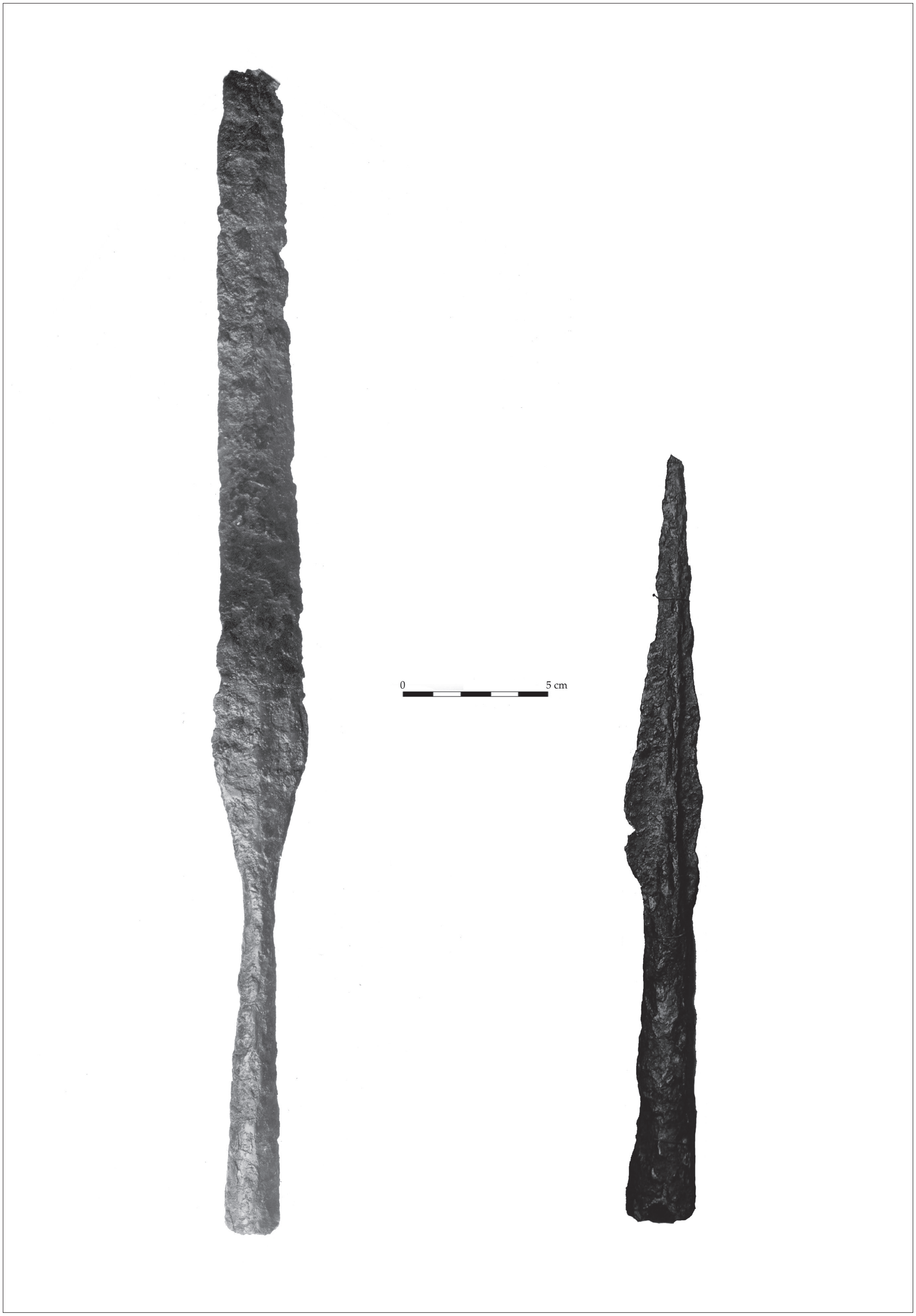

Figure 4.47. Shafted weapon heads from the territory of the Olsztyn Group (1) and the Sudovian Culture (2). 1 — Tumiany, Grave 120; 2 — Czerwony Dwór, Barrow II (1 — after Juga and others 2003, fig. 4213; 2 — after Voigtmann's heritage).

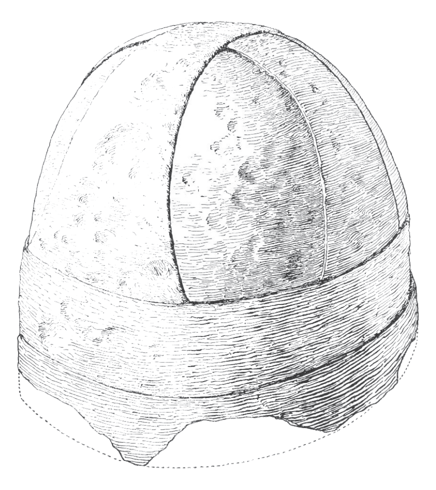

Figure 4.48. Helmet from Bretzenheim (after Vogt 2006, fig. 107 with further reading).

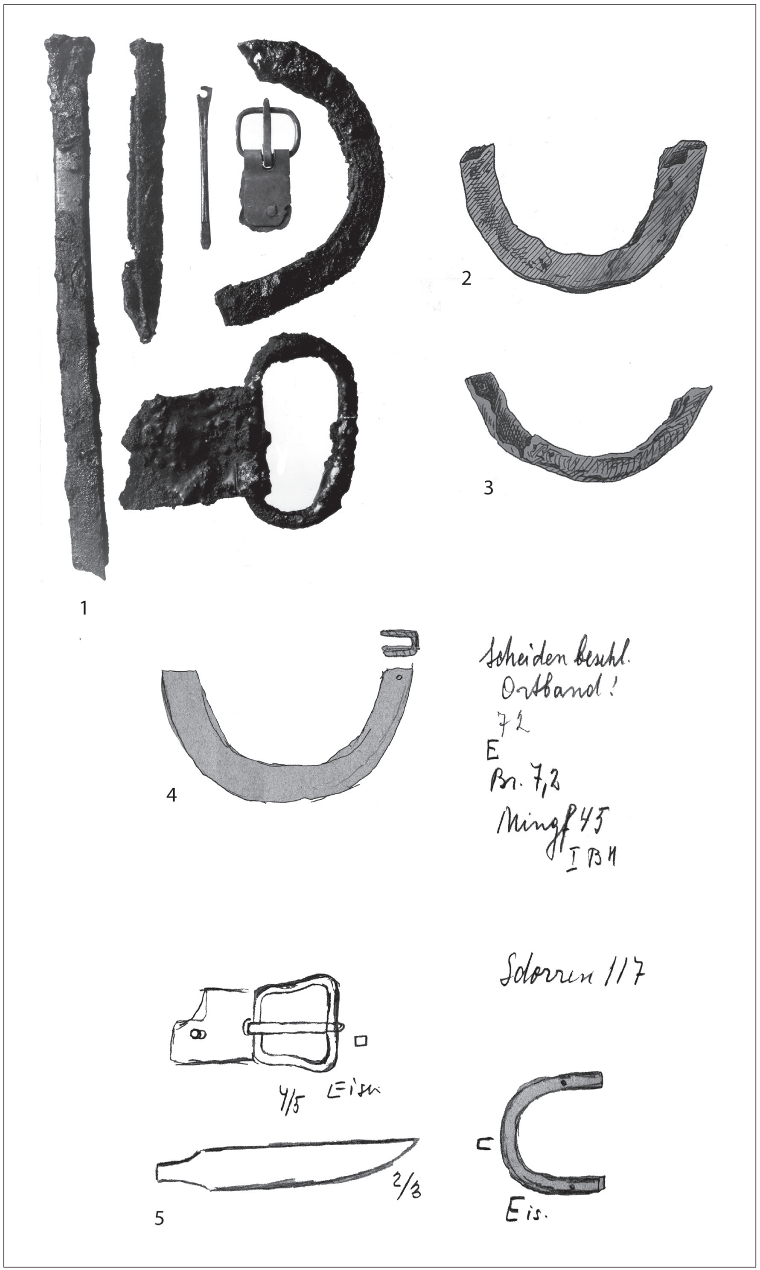

Figure 4.49. U-shaped scabbard chapes from the Olsztyn Group. 1 — furnishing of Grave 92 in Wólka Prusinowska; 2 — Miętkie; 3 — Miętkie, Grave IP 629; 4 — Miętkie, Grave 45; 5 — furnishing of Grave 117 from Zdory (1 — after Grenz's heritage; 2–3 — after Prussia-Museum inventory books 8.089, 8.119; 4–5 — after Jakobson's heritage — Mingfen 030).

was extremely rare among the heads of pole weapons from the Pre-Roman and Roman Periods, whereas in later times they were very popular.[349]

One can also mention the Migration Period spearhead of Type Kazakevičius II found in the Lake Śniardwy (former Spirding-See), close to the village of Zdory, Pisz District (former Sdorren, Kr. Johannisburg), possibly at the sacrificial site.[350]

Trough-shaped fittings are more numerous. Due to their considerable arm span, a few can be interpreted as sword scabbard chapes (Fig. 4.49). The following finds are known: Miętkie, Szczytno District (former Mingfen I, Kr. Ortelsburg), Grave 45 (in this case the span is very large — 7.2 cm),[351] Grave 2,[352] Grave IP 629 (span 6.7 cm);[353] an artefact drawn on a chart where no precise data concerning the find context is legible;[354] a sword scabbard chape from Wólka Prusinowska, Mrągowo District (former Pruschinowen Wolka, Kr. Sensburg), Grave 92[355] (in this case, other finds were longitudinal fittings of the scabbard's edge and a horizontal part, which was probably used for transverse joining of the scabbard);[356] Zdory, Pisz District (former

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[349] Kontny forthcoming a.

[350] Grzędzielska and Kontny forthcoming.

[351] Jakobson's heritage — Mingfen 030; Jankuhn's heritage; Nowakowski 2013, 76, 215 pl. 133:4.

[352] Jankuhn's heritage. In this case there may have been reinforcements of a knife sheath, as the curve of one fitting is so large that its relation to a broad scabbard is not obvious. These finds were defined as shield edge overlays, see Nowakowski 2013, 75 pl. 131:5 — however, this is completely improbable, in fact, due to a long arc formed by the fitting.

[353] Prussia-Museum inventory books 8.089; Jakobson's heritage — Mingfen 092.

[354] Prussia-Museum inventory books 8.119.

[355] Jakobson's heritage — Pruschinowen Wolka 020; Grenz's heritage.

[356] Cf. Biborski and Ilkjær 2006, fig. 116; Menghin 1983, fig. 91.

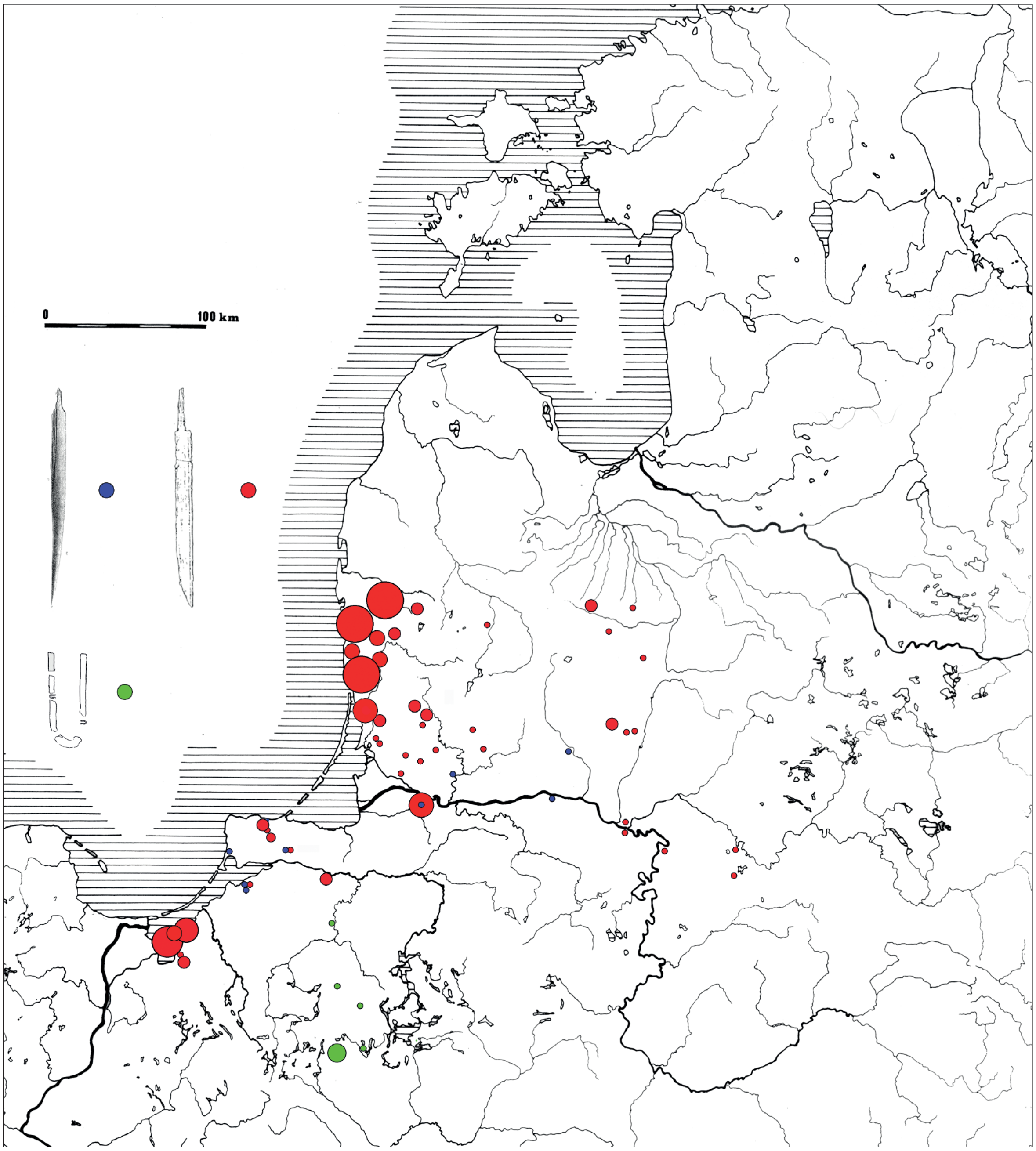

Figure 4.50. Distribution of Balt saxes in the Migration Period: blue circles — early forms, red circles — developed forms, green circles — scabbard chapes with no accompanying swords (after Kontny 2017c, fig. 8).

Sdorren, Kr. Johannisburg), Grave 117;[357] a stray find from Samławki, Olsztyn District, Site 8 (this is perhaps a site that was once examined by Johannes Heydeck and which was assigned to former Loszainen, Kr. Rössel);[358] and another stray find from Kosewo, Mrągowo District (former Kossewen III, Kr. Sensburg).[359]

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[357] Jakobson's heritage — Sdorren 029. In this case the drawing is not to scale, so theoretically it cannot be excluded that one is dealing with part of a knife sheath.

[358] Unpublished finds from research carried out by the Jerzy Okulicz-Kozaryn DAJNA Foundation; I am obliged for information to Marcin Gładki and Agnieszka Jaremek who supervised archaeological excavations at this site.

[359] Gładki and Stokłosa 2014, 123 fig. 10:3.

All these artefacts were manufactured of iron, and in the majority of cases they were attached with rivets (only in the case of finds from Miętkie — the stray one and the artefact from Grave 2 — there were no rivets marked in archival sketches). It does not seem justified to compare the discussed finds to U-shaped scabbard chapes of Migration Period double-edged *spathae*, which are known from northern Europe,[360] although they seem to be close to Type IV according to Anne Nørgård Jørgensen.[361] However, they were made of different raw materials (Scandinavian artefacts are manufactured of copper alloy or precious metals). What is more, the northern European form of U-shaped chapes with no additional metal sheet on the back does not occur further in time than in the late part of the fifth century.[362] Therefore, they went out of use long before the emergence of Balt artefacts.[363] Double-edged swords were extremely rare in the Balt milieu in the Migration Period. Apart from the aforementioned example from Barrow 25 in Szwajcaria and the golden sword fittings of Asian type from Czaszkowo,[364] it is only possible to mention an imported and extremely decorative[365] artefact from Barrow 5 in Taurapilis, Utena District, in the territory of the East Lithuanian Barrow Culture dated to the turn of Phases D and E.[366] Taking these pieces of evidence into consideration, and bearing in mind the fact that saxes were commonly used in the Balt milieu in the Late Migration Period (Fig. 4.50), it seems perfectly justified to relate U-shaped fittings to single-edged swords. The fact that only scabbards were deposited into graves in the Olsztyn Group may be related to the survival of a Balt (Bogaczewo Culture) rite, in which swords were generally omitted. The reasons behind this custom are not clear.

As regards finds which were erroneously related to the Bogaczewo Culture and which are in fact of later origin, one must mention a stray find of an axe head from Łazdoje (Fig. 4.51). It comes from a cemetery where Roman Period artefacts were discovered including, among others, a bar-shaped fire striker and eye fibulae.

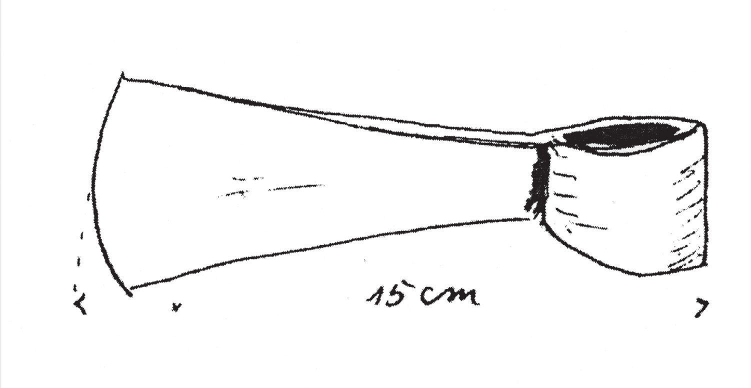

Figure 4.51. Axe head from Łazdoje (after Wyczółkowski 2007, fig. 4:c).

On the other hand, this axe differs from forms that are characteristic of the Roman Period.[367] On the basis of a surviving drawing, it can be said that the blade of the axe is slightly asymmetric. Its upper edge is straight or somewhat curved upward, which is different than in the case of Group I. Thus, in spite of its slight asymmetry, it resembles artefacts of Group II. However, the axe's eye is asymmetric and developed in its lower part, which makes it clearly different from the Group II axes. On the other hand, the discussed find fits within Type Malonaitis 6d from the fourth–tenth centuries.[368] Although this chronology is very imprecise, it may extend beyond the period of the Bogaczewo Culture's existence. If this is the case, it is possible that it might actually be an Olsztyn Group artefact (Łazdoje is situated on the northern extremity of the Olsztyn Group settlement zone). What is more, a careless sketch of spurs that were found in this place suggests Olsztyn Group specimens (a riveted one and a spur with hook-shaped terminals) rather than Subgroup Ginalski F spurs, as maintained by the author of the publication.[369]

Sudovian Culture

As stated above, in the Migration Period weapons disappear from grave furnishings in the territory associated with the Sudovian Culture. Exceptions concern early stages of this culture and they do not reach beyond the Early Migration Period (Fig. 4.52). In the Suwałki Group, it is possible to point out the aforementioned Grave 2 from Barrow 25 in Szwajcaria with the Roman sword and the shoulder belt knob (Phases C3–D1), as well as a burial with spurs and a

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[360] Menghin 1983, 123–32; Bemmann and Hahne 1994, 403–06; Nørgård Jørgensen 2008, 35–47.

[361] Nørgård Jørgensen 2008.

[362] Menghin 1983, 59 fig. 80; Bemmann and Hahne 1994, 403–06; Biborski and Ilkjær 2006, fig. 116.

[363] Kontny 2017c, 96 figs 6–7 list 2.

[364] Migration Period weapons from the former Lake Nidajno come from a time before the origin of the Olsztyn Group and they should be linked with the latest stage of the Bogaczewo Culture or with post-Bogaczewo Culture finds.

[365] These fittings were ornamented with the *Kerbschnitt* technique, which consisted of making deeply incised patterns, usually spiral or floral ones, with clear borders of decorative motifs.

[366] Tautavičius 1981, figs 7–14; Werner 1977; Bliujienė and Steponaitis 2009, fig. 8.

[367] Wyczółkowski 2007, 499–501 fig. 4:c.

[368] Malonaitis 2008, 298 figs 14, 16.

[369] Wyczółkowski 2007, 500 fig. 4:a; cf. Kontny 2018a, 76–77, 86 fig. 6.

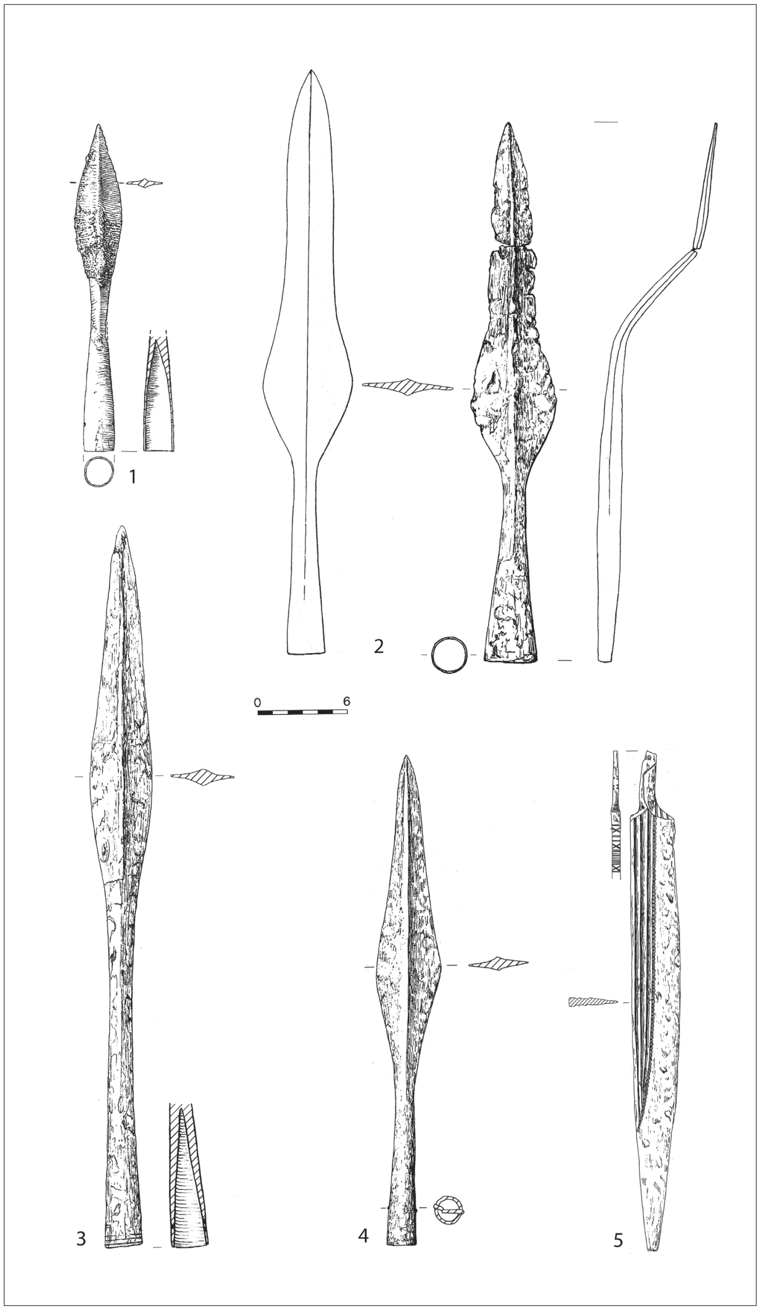

Figure 4.52. Sudovian Culture weaponry from the Migration Period. 1 — Netta, Barrow VI, Grave 164; 2 — Netta, Barrow I, Grave 55; 3 — Netta, Grave 42B; 4–5 — Netta, Barrow III (after Bitner-Wróblewska 2007, pls XXII, XXIX, LVIII, LXXXIV).

bit provided with antler cheekpieces, known from a horse grave in Przebród, Suwałki District (perhaps from Phase E2).[370] As regards the Augustów Group, one should mention a few graves from the necropolis at Netta, Augustów District (all from Phase D): Grave 42B with a shafted weapon head of Type Kazakevičius ID (variant);[371] Grave 55 with a shafted weapon head of Type Kazakevičius II;[372] finds from the disturbed Barrow III — a shafted weapon head which is close to Type Kazakevičius II, and a knife with a broken point (perhaps a *Dolchmesser* or its prototype);[373] Grave 127 containing a shafted weapon head which is similar to Type Kazakevičius IG;[374] and Grave 164 with a shafted weapon head of Type Kazakevičius ID.[375] The territory of the Gołdap Group yielded only one shafted weapon head from Czerwony Dwór, Olecko District (former Rothebude, Kr. Goldap), where an artefact of 30.5 cm in length with a pronounced rib was found in Barrow II (Fig. 4.47:2). Regrettably, no other finds were discovered, which is why it is impossible to define its chronology.[376] It is therefore not clear whether this shafted weapon head comes from the Roman Period or from the Migration Period.

As the source database is sparse, it is difficult to offer a comprehensive summary. It seems, however, that Sudovian weapons did not differ from the West Balt standard, at least in the Early Migration Period. This is implied by the shafted weapon heads that fit within the typology of Kazakevičius, as well as by the *Dolchmesser* from Netta. Regrettably, it is impossible to discuss the situation in Phase E.

Studies of weaponry from the Migration Period in the territory of the West Balt milieu are still in their development phase. It will certainly be possible to advance them, but this requires taking into consideration a number of finds from the Sambian-Natangian territory and from Lithuanian groups, where weapons occur throughout the entire period in question without interruption. After these archaeological sources are processed, it will be necessary to re-examine weaponry from the territory of north-eastern Poland in the discussed period.

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[370] Klewek 2017, 67–68, 71 table XXX.

[371] Bitner-Wróblewska 2007, 20 pls XXI–XXII; the collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/364 (henceforth the same inv. no.). A time marker is a tongue-like belt end fitting which is close to Type 12.12 according to Madyda-Legutko 2011, 91, 95.

[372] Bitner-Wróblewska 2007, 22 pl. XXIX:1–8. The assemblage is dated on the basis of buckles of Types H23 and H9 according to Madyda-Legutko 1986, table 9.

[373] Bitner-Wróblewska 2007, 31 pl. LVIII:1–2. What speaks for such an identification of the knife (which is a time marker) are its size (the surviving length is 34.4 cm) and parallel grooves under the back. These finds may have originally belonged to furnishings of Grave 109.

[374] Bitner-Wróblewska 2007, 34–35 pl. LXIV. The chronology was proposed on the basis of a fibula with a solid shortened catch-plate of Type Schönwarling/Skowarcz — Bitner-Wróblewska 2007, 53.

[375] Bitner-Wróblewska 2007, 42 pls LXXXIII–LXXXIV. The chronology can be identified on the basis of a fibula of Type H39 according to Madyda-Legutko 1986, table 9.

[376] Bujack 1885, 21; Voigtmann's heritage (the archive card which contains, among other things, a photo of the shafted weapon head, states the length as 26 cm; it seems that since the time when the artefact was excavated there have been subsidences in its structure). This shafted weapon head can be classified as an example of Type IB/IБ according to V. Kazakevičius. Regrettably, this does not refine its chronology.

Participation in Military Actions of a Supralocal Range

Is it imaginable that, in the light of the above observations, Balt warriors were considered attractive allies or members of military retinues? It is possible to respond to this question by analysing finds from sacrificial deposits in bodies of water. If one accepts the hypothesis that weaponry from large offerings was booty taken from invaders, the Balt participation in long-distance expeditions should be evidenced by typical Balt weapons in north European sacral contexts. Such weapons were in fact identified in Deposits Vimose 1 and 2a[377] from the Early Roman Period and the beginning of the Younger Roman Period in Funen. In these assemblages, it proved possible to point out Balt types of axes, shield bosses, socketed axes, and tools. Other finds included single-edged swords, different types of shield bosses, shield grips, double tongue buckles, as well as bar-shaped fire strikers that occur in both the Przeworsk and Bogaczewo Cultures (Fig. 4.53).

It seems, therefore, that in the second century, and possibly in the early third century, considerable numbers of Balt people took part in military expeditions to the Danish isles. It is not likely, however, that warriors from the territory associated with the Bogaczewo Culture were organizers of these expeditions. Bearing in mind the dominant role of Przeworsk Culture weaponry in central Europe in this period, it seems much more probable that it was Przeworsk Culture military commanders who led these raids. Thanks to such contacts the Balts had an opportunity to learn about new trends concerning weaponry, and this is perhaps the reason behind evident similarities between the Przeworsk Culture and the Bogaczewo Culture model of armament. The role of 'poor relation' was not necessarily reduced to that of 'cannon fodder'. In theory, it could be assumed that — due to proximity to the sea — Balt people had a much better knowledge of the sea and sailing than Przeworsk Culture warriors did, and the use of boats in military expeditions to Funen was indispensable. On the other hand, in the Roman Period this situation may have rather applied to the maritime Dollkeim-Kovrovo Culture, or the Wielbark Culture with its partly littoral position, than to the Bogaczewo or Sudovian Cultures which both occupied lakeland territories. The possibility cannot be excluded, however, that cultural and ethnic proximity also facilitated the involvement of more remote Balt tribes in such operations.

Initially subordinate position of Balt 'dogs of war' was not necessarily the case by the end of an expedition. The war carried a risk of knocking one off the perch or even death, but it could also improve a warrior's opportunities. It seems that the latter possibility is evidenced by the aforementioned Grave 1 from Barrow 2 in Szwajcaria in the Sudovian Culture (Fig. 4.11:6). A mature (about fifty-five years old) warrior who was interred there according to local rites was provided with a very wide variety of grave furnishings (Figs 4.15–18). These goods demonstrate contacts both with Przeworsk Culture territories (sword, one of the polearms) and with Scandinavia (ornament of the horse headgear with motifs of a bird protoma and a human head, a Vennolum type spearhead, buckets-containers for horse headgear). The furnishings also testify to the use of local solutions concerning the technology of manufacture and weapon types (an axe, one of two horse headgears, the way in which the sword scabbard is suspended and its connection with the use of transverse clasps, the method of manufacture of Przeworsk Culture patterns from silver sheet on one of the shafted weapon heads).[378] Of special interest is the set of baldric fittings, which does not match a coherent artistic convention. It can be rather associated with emblems-souvenirs from various expeditions. It resembles present-day badges with names of music groups which are worn by the youth (also those of quite advanced age) as fittings on bag or rucksack straps or lapels, but also on headgear or outer garments. Taking into consideration that this individual was buried in Subphase C1b, that is soon after the period of the greatest intensification of military events in northern Europe (i.e. slightly earlier Scandinavian Subphase C1b), it seems very likely that it was due to participation in such operations that this warrior achieved such an unusual position in his native milieu. It is actually the richest burial that is known in the entire Sudovian Culture.

Traces of Balt participation in the multi-ethnic retinues can also be noticed in the grave furnishings in the Crimean necropolis in Čatyr–Dag, Balaklava District, dated to the second half of the third and to the fourth centuries. This burial ground differs from local rites with regard to funeral customs. The assemblages of weaponry form there a real cultural patchwork, including Scandinavian, Przeworsk Culture, Balt, Černâhov

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[377] Kontny 2019a.

[378] Kontny 2013a.

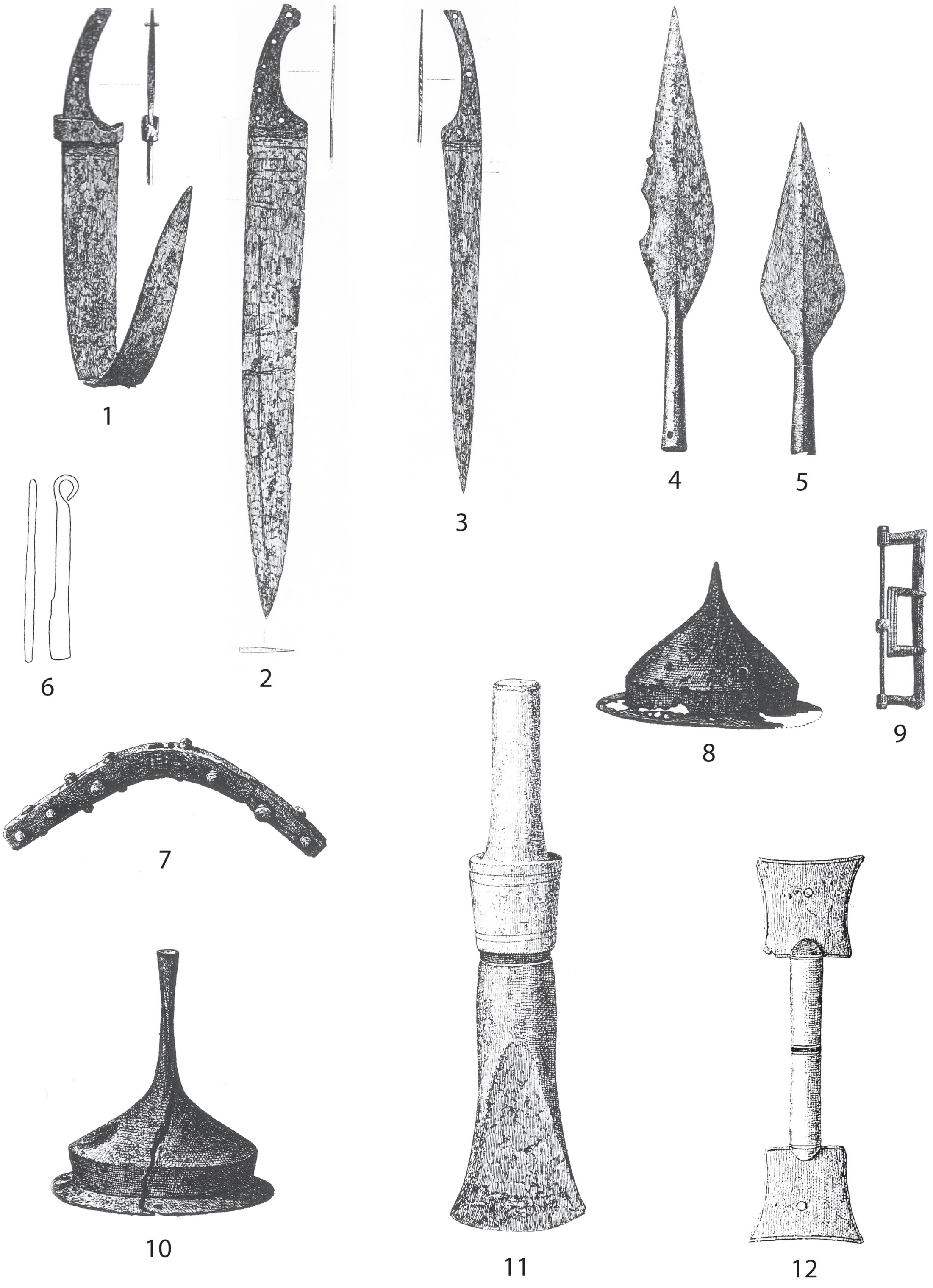

Figure 4.53. Examples of weapons with Przeworsk Culture and Balt traits from the Vimose bog site in Funen (1–6, 8–12) and a putative saddle pommel (7). Not to scale (after Kontny 2017b, fig. 14 with further reading).

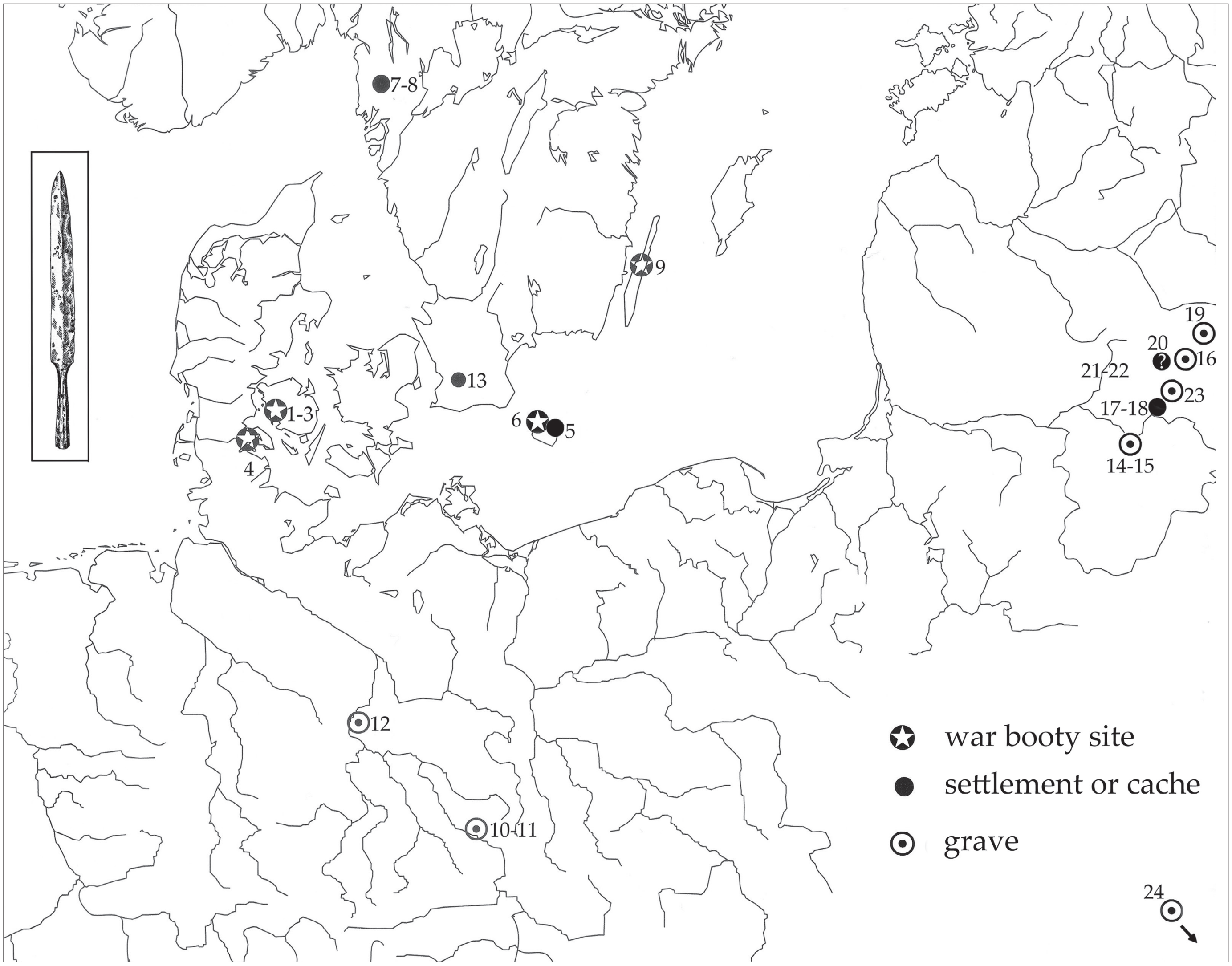

Figure 4.54. Distribution of shafted weapon heads of Type III according to Kazakevičius. 1–3 — Kragehul; 4 — Nydam; 5 — Sorte Muld; 6 — Balsmyr; 7, 8 — Nedergården; 9 — Skedemosse; 10, 11 — Dresden-Dobritz, Grave 1; 12 — Gübs; 13 — Uppåkra; 14, 15 — Neravai-Grigiškės, Barrow 20, Grave 2 and Barrow 22, Grave 4; 16 — Taurapilis, Barrow 5; 17, 18 — Vilnius; 19 — Lapušiškė, Barrow 9; 20 — Kivyliai, stray find; 21, 22 — unknown location in the territory of Lithuania; 23 — Santaka, Barrow 4, Grave 2; 24 — Čatyr-Dag, Grave 2 (after Kontny 2017b, fig. 17 with further reading).

Culture, Sarmatian, Pontic, and even Roman elements. One interpretation suggests that the site was used as the burial place of a group of warriors from various tribes who came to Crimea during the time of the Gothic Wars in the mid-third century. A comparison to the Fellowship of the Ring in J. R. R. Tolkien's *The Lord of the Rings* trilogy seems more than appropriate.[379]

Further evidence of the participation of Balt warriors in military operations in the Migration Period includes finds of shafted weapon heads. These have analogies in the classification of Kazakevičius, and are known from northern European offering sites, both in water and on land (Fig. 4.54).[380] In addition, there are discoveries from the Balt sacrificial sites in former Wolka-See and in Czaszkowo. A low degree of recognition, and in the case of the latter site also a still non-satisfactory state of research, do not allow for a statement whether the weapons that were deposited there were used by local people or by nearby Balt incomers, or perhaps these artefacts bear testimony to a victory over warriors from faraway lands. The aforementioned nature of Balt movements in the Migration Period, which was probably to a great extent war-related, resulted in, i.a. the origin of the Elbląg Group. Balt mobility in this period is also evidenced by non-military finds from Öland, Gotland, or Bornholm. These finds include typically Balt star-footed brooches, Dollkeim-Kovrovo and Skowarcz/Schönwarling type fibulae, as well as artefacts with rung-shaped widenings on the feet (German *Schlußkreuzfibeln*).[381]

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[379] Cf. Kontny 2013b.

[380] Kontny 2017b, 40–43 fig. 17.

The participation in expeditions with warriors of varied ethnic origins explains the adoption of numerous foreign military solutions, i.e. the influence of the Przeworsk Culture weaponry model in the Early Roman Period and at the beginning of the Younger Roman Period, as well as later northern European inspirations that can be seen both as imports and imitations of weapon forms.[382]

All this leads to a positive assessment of the military value of the Balt community from the present-day Polish lands. Balt craftsmen frequently made use of old and anachronistic technological solutions, and local warriors were probably not able to afford complete sets of weaponry as often as, e.g. their southern neighbours. However, there is no doubt that Balt warriors could make use of their native weapons, including blunt ones. Therefore, many representatives of neighbouring peoples could paraphrase the words of Tolkien and say: 'It does not do to leave a live Balt out of your calculations if you live near him.'[383]

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[381] Kontny 2020.

[382] Kontny 2017b, 43, 45 fig. 18; 2019a.

[383] In the original version this fragment concerned a dragon (Tolkien 1990, 207).

CHAPTER 5

The Germanic Shield and its Origin

This chapter discusses European shields in the proto-historic period. However, in order to properly deal with this issue, it is essential to make references to earlier times and to non-European areas. What is more, the shield itself is not a point of departure at all. It was perhaps an ordinary wooden stick that was the first offensive weapon. Due to the danger it posed, it became necessary to invent a means of defence. However, the shield was not immediately invented for this purpose. Strikes were initially parried with a stick — either the same that was used as the main offensive weapon or with another one. In the course of time, that stick was shaped in such a way that it offered better protection for the hand. For this purpose, two overlapping parts of raw material were joined in order to create space for a protected grip in the central part of the artefact. The raw material was not necessarily wood, as it was possible to use, e.g. antler, as in the case of the *maduvu* from India (Fig. 5.1:1).[1] Yet another solution was the use of a stick that was broader in the central part and was provided with an opening for the grip. By properly processing a relatively thick piece of wood, an artefact resembling a parrying stick was created. However, it was provided with a hollowed cavity in the centre. This cavity protected the hand and was provided with a grip. That is what the parrying sticks look like, or pre-shields, from central Africa or Australia (Fig. 5.1:2) that have survived, e.g. in the ethnographic collection of the Pitt-Rivers Museum in Oxford.[2]

The benefits of using such shields can be perfectly seen in the traditional stick combat of the South African Zulu.[3] A shorter (nearly 90 cm in length) profiled stick called *induku* was used for striking, while the other one (long and straight) was applied for parrying. The latter was combined with a miniature leather shield called *ihawu* (Fig. 5.1:3). It was also held in the left hand, thus providing it with better protection. Such shields-sticks were called *ubhoko* and were much more effective than short defensive sticks. Zulu duels today are mainly pastimes and recreation (Fig. 5.1:4). However, they indicate that it is fairly easy to defend against strikes delivered from various directions without a need to make broad movements. It is enough to slightly shift the setting of the shield-stick set in the vertical axis in order to stop most strikes. Only in some cases was it necessary to change the position of the defence weapon into a horizontal one; this, however, can be done immediately. It is probable that one of the ideas to increase protection was to provide such a developed stick with a shield board, while the stick itself was reduced to a central spine which joined the entire structure. A similar style of construction can be seen, e.g. in the *salawaku*, the shields used by the inhabitants of the Maluku Islands (Fig. 5.2). Some of these were composed of a stick (which was bent in its central part to secure a comfortable grip), to which a board was attached from outside (Fig. 5.2:2). In other cases the former stick was 'merged' into the shield structure (Fig. 5.2:1).[4] These shields usually widened in an hourglass-like manner at their shorter ends.[5]

This was, obviously, not the only way in which to make shields — in all probability, shields with developed boards were more popular on a global scale. Archaeological sources record their origin relatively late, i.e. since the Bronze Age. A stone chamber grave of the Globular Amphora Culture in Langeneichstädt in east Germany yielded planks which were 1.3 cm thick and bound with bast. Many researchers believe that this is the earliest (Neolithic) known shield.[6] On the other hand, a vestigial state of preservation makes

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[1] *Maduvu* (*maru*, *madu*) is a weapon made of blackbuck (*antelope cervicapra*) antler. It was used for defensive purposes, but sharp antler ends (which were later reinforced with iron heads in some cases) rendered effective strikes possible. Some examples of *maduvu* were provided with round shields which protected the hand. Cf. Pitt-Rivers 1867, pl. V:67–68; Burton 1884, 11–12 fig. 7; Jähns 1899, 162 pl. VIII:9.

[2] Pitt-Rivers 1868, pl. XVI diagrams 9, 10.

[3] Coetzee 2002.

[4] *Salawaku* are particularly known from *cakalele* ritual war dances that were originally meant to celebrate victories.

[5] van Zonneveld 2001, 118.

[6] Bleicher and others 2006, 92.

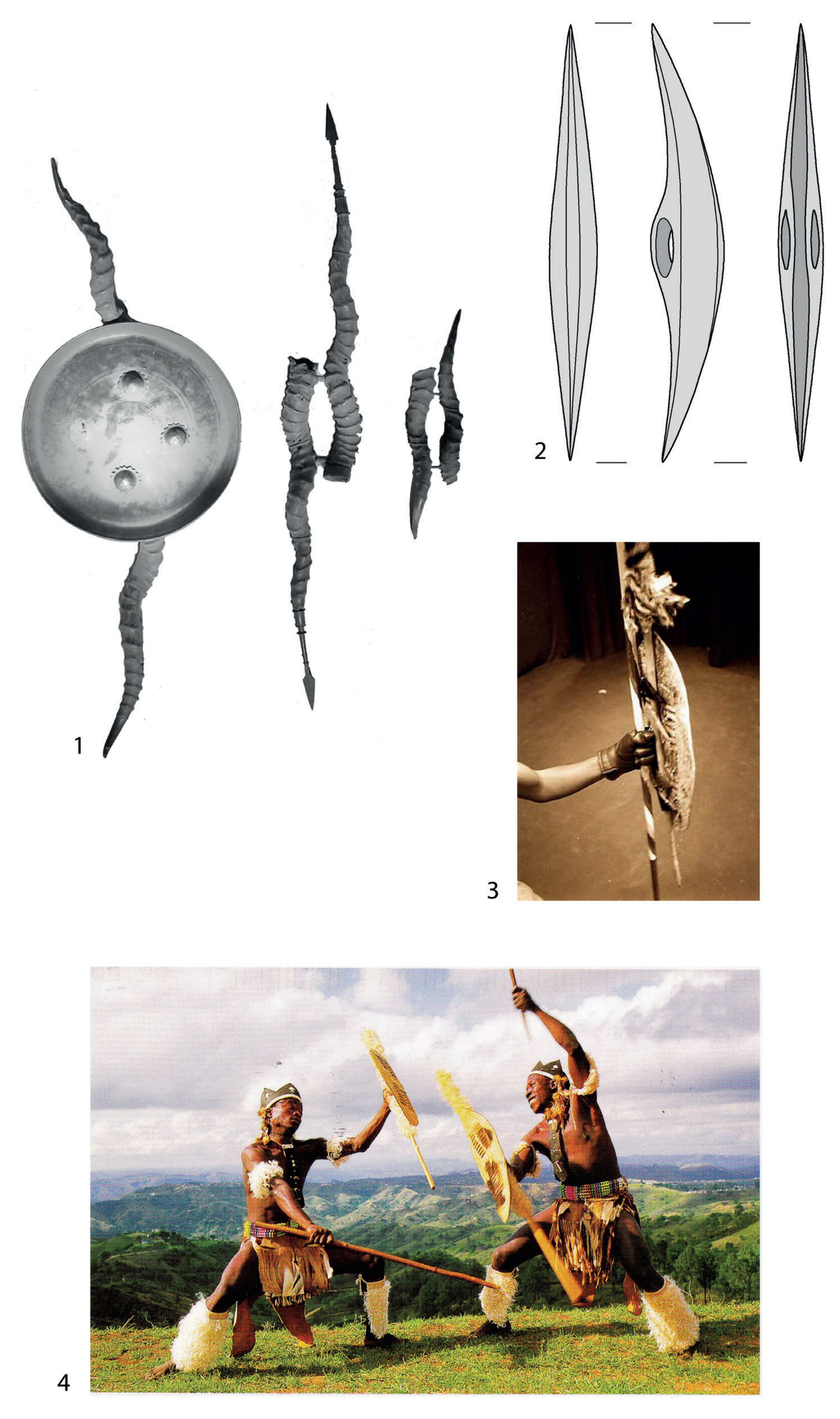

Figure 5.1. Proto-shields. 1 — *maduvu* from India; 2 — Australian artefact; 3 — *ubhoko* of the Zulu; 4 — postcard from 2009, depicting a Zulu stick duel in the PheZulu Safari Park in the Valley of a Thousand Hills (1 — after <https://commons.wikimedia.org/wiki/File:Maduvu.png>, by GamerDadd — own work, CC BY-SA 3.0; 2 — drawn by Paweł Szymański based on <http://www.onlinegalleries.com>; 3 — after Coetzee 2002; 4 — elaborated by Bartosz Kontny based on <http://gemsworldpostcards.blogspot.com/2013/12/after-christmas-update.html> [accessed 10 May 2018]).

it impossible to determine the artefact's function. It seems probable that it was, for example, part of the grave chamber construction. However, it is impossible to completely rule out the use of shields in the Stone Age. These were not necessarily made of wood, as other raw materials (such as leather or wicker) were also used in their manufacture.[7]

Still, the earliest certain finds of shields can be related to as late as the Bronze Age. Their origin can be considered a response to more and more developed forms of spears and to the emergence of the first swords (about 1600 BC).[8] In this period, round shields were chiefly used. These were either bronze (since the end of the Middle Bronze Age, that is the thirteenth century BC)[9] or wooden. Metal artefacts (Fig. 5.3:1–2) were not necessarily effective. Experiments that were carried out by John Coles, the father of experimental archaeology, demonstrated that it was surprisingly easy to penetrate such shields with bronze spears or swords. In contrast to this, shields made of organic materials (especially leather) were much more resistant (Fig. 5.3:3).[10] There is no doubt that the appreciation of the role of leather shields by this researcher was of paramount significance.[11] In consequence, however, there was a widespread belief that bronze shields were generally used for parades or rituals.[12] This idea is supported by the fact that such shields were almost always provided with a motif of ornamental concentric lines (cut through with a U-shaped or V-shaped pattern), that was believed to be a solar symbol. What is more, there are depictions of (perhaps parade) transportation of shields on carts.[13] What also speaks in favour of ceremonial interpretation is the fact that such bronze shields were discovered in bogs or waters, and such finds are considered ritual deposits. However, in contrast to the aforementioned opinion, it seems that the combat usefulness of many bronze shields is obvious. Some such shields are clearly larger and heavier than others. Their edges are evidently thickened, which strengthened the toughness of the part that was exposed to cutting strikes. What is more, there are examples of shields with traces of weapon strikes and repairs, which suggests their practical use. Anyway, even the smallest shields cannot be by definition considered non-functional miniatures, as they were provided with

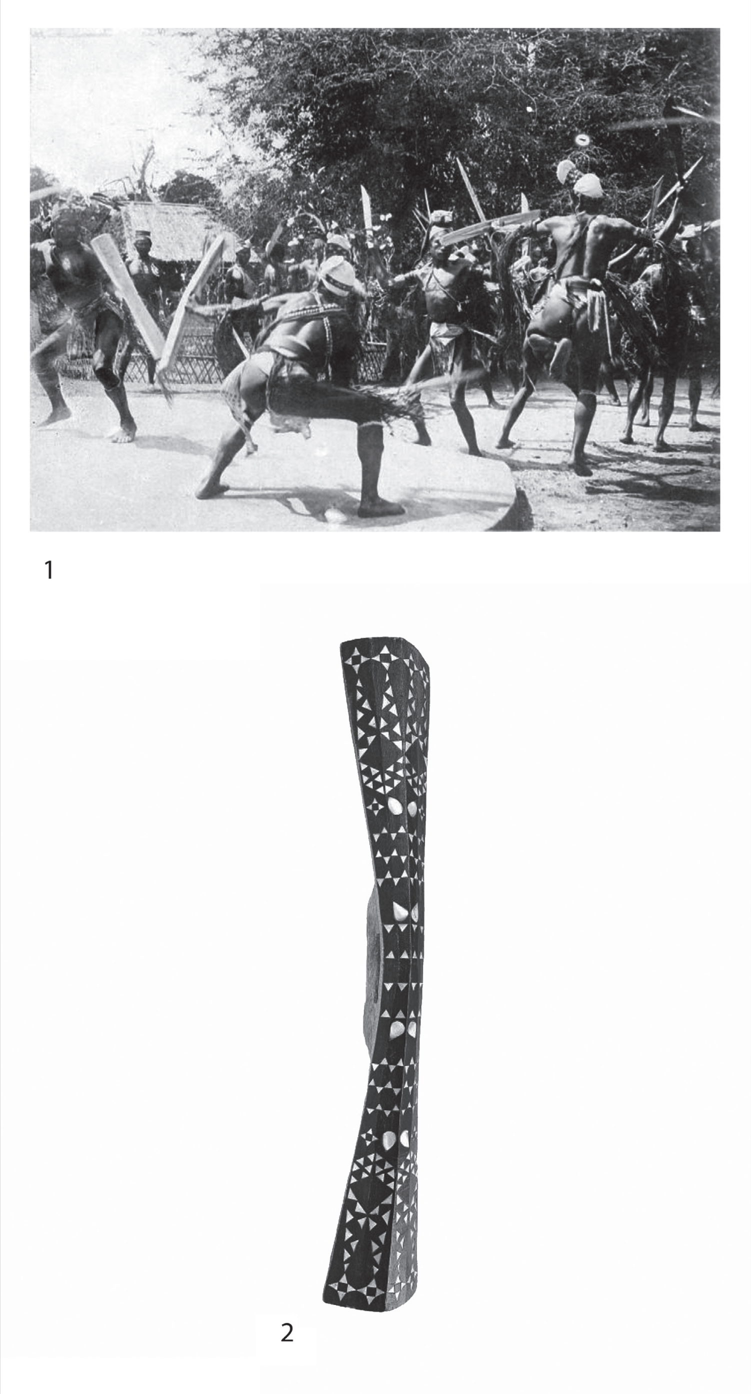

Figure 5.2. *Salawaku* shields from the Maluku Islands. 1 — *cakalele* dance with *salawaku* shields in 1900s; 2 — *salawaku* shield, from the collection of Tropenmuseum, dated between 1850 and 1900 (1 — after <https://upload.wikimedia.org/wikipedia/commons/c/cf/COLLECTIE_TROPENMUSEUM_Honitetoe-Alfoeren_voeren_de_%27Tjakal%C3%A9l%C3%A9%27_krijgsdans_op_Seram_TMnr_10003481.jpg> by unknown author, Collection of Tropenmuseum in Amsterdam, CC BY-SA 3.0; 2 — after <https://en.wikipedia.org/wiki/Salawaku#/media/File:COLLECTIE_TROPENMUSEUM_Houten_dansschild_met_schelpversiering_gebruikt_tijdens_de_initiatie_van_jongeren_TMnr_5980-1.jpg> [accessed 3 June 2023], by Tropenmuseum, part of the National Museum of World Cultures, CC BY-SA 3.0).

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[7] Christensen 2004, 141.

[8] Molloy 2017, 290.

[9] Uckelmann 2011, 192–93.

[10] Coles 1977, 204–06.

[11] Harding 1999, 87, 92.

[12] Coles 1962, 185.

[13] Decorations can also be found on shields made of organic materials, while iconography depicts artefacts made of a material which cannot be determined. Therefore, this argument must be considered erroneous.

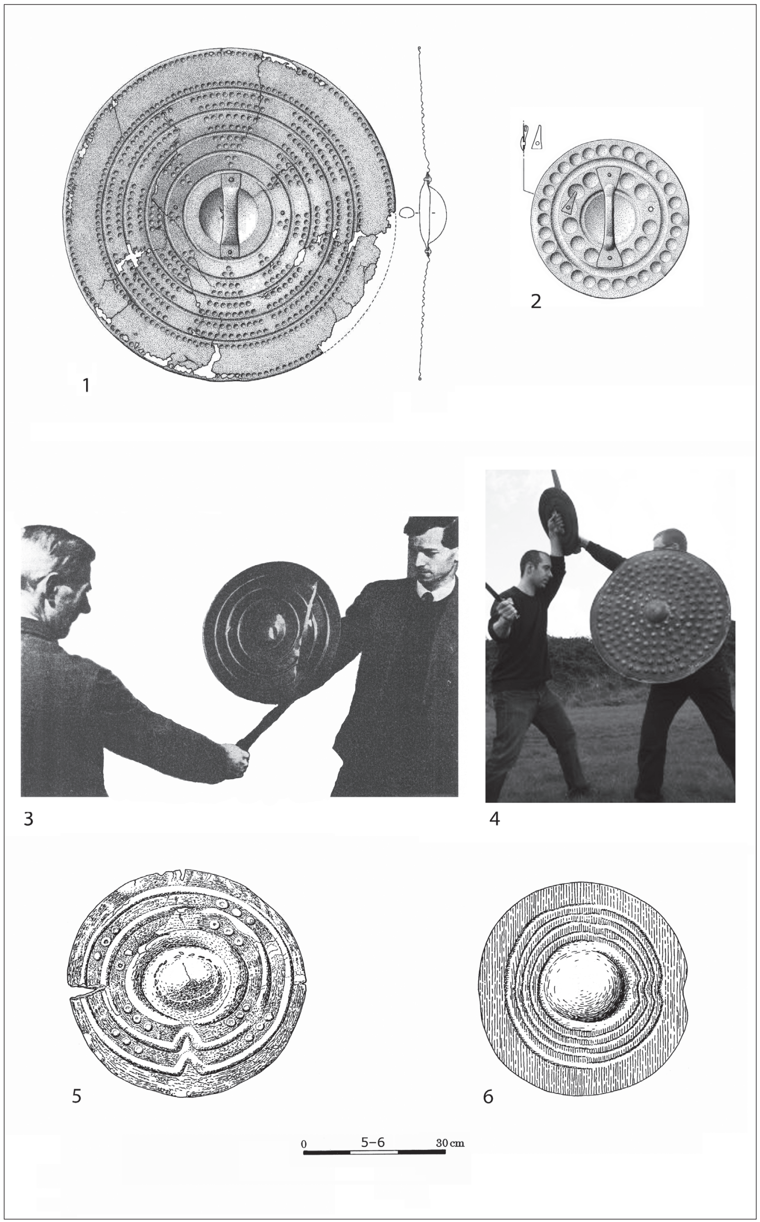

Figure 5.3. Bronze Age shields. 1 — bronze shield from the thirteenth century BC found in Lommelev Mose, Falster, Denmark (diameter 69 cm, collection of the National Museum in Copenhagen); 2 — small bronze shield from Athenry, Ireland (diameter 33.5 cm, collection of the British Museum); 3 — experiment of John Coles with the use of replicas of a bronze shield carried out in 1963; 4 — experiment of Barry Molloy; 5 — leather shield from Cloonbrin, Co. Longford in Ireland; 6 — wooden shield from Cloonlara, Co. Mayo in Ireland (1–2 — after Uckelmann 2011, figs 2, 3; 3 — photo L. P. Morley, University Museum of Archaeology and Anthropology, Cambridge, elaborated by Bartosz Kontny based on Harding 1999; 4 — photo Barry Molloy taken at UCD Centre for Experimental Archaeology and Material Culture — Kevin Rowan Degroot (left) and Barry Molloy (right), courtesy of Barry Molloy; 5–6 — after Wadell 1998, fig. 103.1, 3.

grips matching the hand's size.[14] Shields with thinner boards may also have been useful in combat. It is not known how often warriors used metal heads of shafted weapons or swords that could pose danger to the shield. Among artefacts that were found in a recently discovered battlefield from the thirteenth century BC in the valley of the Tollensee River in Mecklenburg there were merely individual shafted weapon heads made of metal. Their use can be also supposed on the basis of rhombic damage inflicted on bones that were found there. This demonstrates the elite nature of such weapons[15] (it is a reason why shafted weapon heads are often found in hoards). It is probable that more commonly used were the polearms with heads made of bone or antler, as well as wooden sticks or flint daggers. Such weaponry could have been resisted with bronze shields. Decorations do not contradict the military use of weapons, as boards of shields of various kinds were eagerly ornamented.[16] This was done for the sake of a psychological effect, in order to manifest one's identity (clan symbol) or pertinence to a given detachment, as well as for other reasons. Today, it is also known that much more durable bronze was used for shield manufacture than the alloy applied by John Coles in his experiment. What is more, his replicas were much thinner than the majority of known shields. New and more reliable experiments carried out by Barry Molloy (Fig. 5.3:4) demonstrated that bronze shields were also effective against metal offensive weapons. It can even be speculated that some shields may have been used in a battle line, while others were appropriate for more offensive combat.[17] Marion Uckelmann accurately notices that this does not exclude the use of shields in the sacral sphere, with special reference to shields that had already lost their combat properties.[18]

Apart from metal shields, it is certain that those made of organic materials were in use in the Bronze Age. It is possible that they came into use even earlier.[19] Such artefacts survived most numerously in Irish bogs. Wooden moulds for leather shield manufacture are known from Kilmahamogue, Co. Antrim, and Churchfield, Co. Mayo. The former can be dated to *c.* first half of the second millenium BC, which is the earliest (indirect) evidence of the use of leather shields in the

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[14] Uckelmann 2011, 193–95.

[15] Jantzen and others 2011; Jantzen and others 2014, 13–16; Lidke and Terberger 2015, 342–43; Brinker and others 2015, 349; Curry 2016, 1388.

[16] Uckelmann 2011, 195.

[17] Molloy 2009, 1057–62; 2017, 300–01; see also contemporary experiments with similar results made by Hermann and others 2020.

[18] Uckelmann 2011, 195, 197.

[19] Molloy 2009, 1053–55; 2017, 299–301.

Bronze Age. Yet another find is an actual leather shield discovered in Cloonbrin, Co. Longford in Ireland, which was made of 5–6 mm thick leather, probably between 1132 and 971 cal. BC.[20] Its diameter was about 0.5 m (Fig. 5.3:5). Such a weapon was very durable, as it was hardened with hot water, impregnated with wax, and it also underwent other procedures. Light leather shields were first used when short rapiers were introduced but they remained in use even later, in parallel with more robust short swords with integrated handles. Their functionality is proven by observation of the Cloonbrin shield. Combat damage is very visible here: deep cuts along the edge, fine linear scratches marking places in which sharp blade weapons were deflected, and punctures made by spear points or swords. Many of them appear around the boss, clearly used to actively intercept a cutting weapon.[21]

Wooden shields may have come into use at the same time as leather shields. They were recorded in the early stage of existence of the Urnfield Culture (finds from graves in Wollmesheim in Rhineland-Palatinate and in Mehrstetten in Baden-Württemberg, where wooden artefacts with ornaments composed of studded bronze knobs were discovered).[22] Finds from the Irish bogs of Cloonlara, Co. Mayo (1633–1164 BC — Fig. 5.3:6) and Annadale, Co. Leitrim are of earlier chronology.[23] These two wooden shields were made from alder trunks. In the first example, the shield board was very heavy (a shield of more than 4 kg in weight was barely functional). In the other (weighing 1.8 kg), the board was made from a transversely cut 'slice' which was additionally thinned. The grip was an integral part of this 'slice', while the shield boss (which protected the hand holding the shield) was made separately and then attached to the board. In the case of metal shields the boss was hammered from a bronze sheet and the grip was attached separately (Fig. 5.3:2). Shields made of organic materials were manufactured in the same shape, and with similar ornaments as in the case of metal artefacts. However, this was not a universal rule — in Scandinavia there are images on rocks (petroglyphs) in Vitlycke in the Swedish province of Bohuslän dated to the Bronze Age, which depict warriors with large elongated shields in the shape of rectangles with rounded corners.[24]

Obviously, shields had symbolic value whether or not they were made of bronze. Their deposition in watery locations and ceremonial use seem to prove their social utility. Even simple organic shields may have served as mnemonics to their owners, but while put on display in houses they could also be used for storytelling and boasting of their owners' martial deeds.[25]

The development of shield forms took a quite peculiar course in Greece.[26] There are numerous images of very large figure-of-eight (Fig. 5.4:1) and tower shields (Fig. 5.4:2) in the Minoan Culture and in the Early Mycenaean Culture (especially in the seventeenth–sixteenth centuries BC). Such shields (so-called body shields) protected almost the entire body of the warrior which determined tactics for centuries. They were made of wicker on wooden frames and then covered with multiple layers of leather, probably bovine.[27] In this case, no grip was used. Instead, such shields were provided with a leather thong (*telamon*) that was thrown over the neck and the left arm and bore the weight of this — likely rather heavy — defensive item. Such shields were relatively comfortable in use,[28] especially when worn on the back, and they did not restrict the user's movement, even while running. They fulfilled their role well in the period when armour was not yet widely known. The use of such shields made more sense in battle array, so perhaps they were used by elite detachments of warriors.[29] Herodotus believed[30] that it had been the Carians from Asia Minor that invented the shield grip and taught the Hellenes how to use it. This is not true,[31] as it is known that shield grips were in use beyond Greece in the second millennium BC for bronze and organic shields, sometimes in combination with straps. This is evidenced by examples of thong attachments on the inner side of some bronze shields. Narrowings in the central part of the longer sides gave figure-of-eight-shaped shields a very particular shape. These openings could have been used to deliver spear and sword strikes from the side and, as a bonus, they also decreased the weight of the shield. It is interesting that figure-of-eight and tower shields were also used in hunting, which is evidenced by a scene depicted on a dagger found in Shaft Grave IV in Circle A in Mycenae.[32] Such use of the shield may perhaps be exotic to us, but it is also demonstrated for ancient

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[20] Uckelmann 2011, 193; 2012, 159; Molloy 2020, 27.

[21] Molloy 2020, 27–29.

[22] Coles 1962, 172, 179; Osgood 2000, 79–80.

[23] Molloy 2009, 1055; 2017, 299–301; Uckelmann 2012, 72–73.

[24] Kaul 2003b, 206 fig. 5.36.

[25] Molloy 2020, 28.

[26] Snodgrass 1964, 49–64 figs 1, 2, 15:b, 36; Monks 2000, 131–46; Deligiannis 2009; Georganas 2012, 311–12; Smith 2015, 57–68; Molloy 2012, 125–26; Molloy and Horn 2020, 121–22.

[27] Spence 2002, 314–15; see Smith 2015, 68.

[28] The usefulness of tower shields is demonstrated by present-day experiments, see Smith 2015, 80–89.

[29] Smith 2015, 90–92.

[30] Herodotus, *Histories*, I. 171. 4.

[31] Snodgrass 1964, 201.

[32] On the other hand, Barry Molloy suggested that the depiction of shields in such scenes is unlikely to represent a defensive necessity in hunting but it is rather an expression of warrior

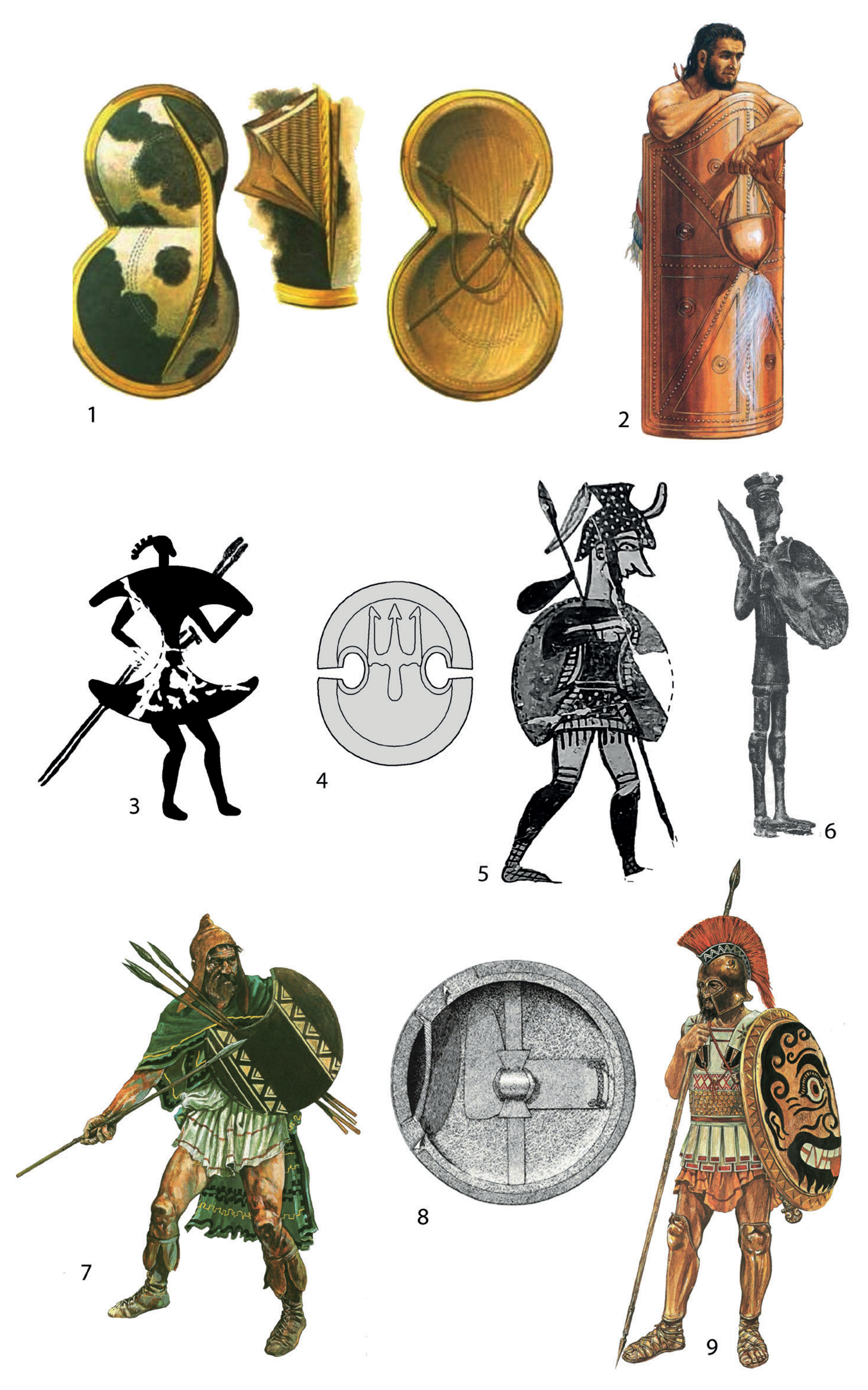

Figure 5.4. Greek and Sardinian shields. 1 — reconstruction of a Mycenaean figure-of-eight shield; 2 — Ajax with a Mycenaean tower shield; 3 — Dipylon shield on a vessel from the collection of the Louvre Museum; 4 — depiction of a Boeotian shield on a stater from Haliartos; 5 — early *pelte* depicted on the Warrior Vase from Mycenae, collection of the National Museum in Athens; 6 — *bronzetto* of the Sardinian Nuragic Culture, collection of the National Archaeological Museum in Cagliari; 7 — reconstruction of the appearance of a Thracian peltast; 8 — reconstruction of a *hoplon*; 9 — reconstruction of the appearance of a Spartan hoplite (1 — after Connolly 1977; 2 — after Connolly 1991; 3 — redrawn by Paweł Szymański and Bartosz Kontny; 4 — redrawn by Paweł Szymański based on Classical Numismatic Group, Inc. <http://www.cngcoins.com> [accessed 3 July 2023], CC BY-SA 2.5; 5 — redrawn by Bartosz Kontny based on photo by Sharon Mollerus, <https://upload.wikimedia.org/wikipedia/commons/c/c0/Warrior_Vase.jpg> [accessed 4 July 2023], CC BY 2.0; 6 — after Lilliu 1966, fig. 12; 7–9 — after Warry 1995, 35, 50).

Rome and Byzantium. Tower shields are believed to have gone out of use about the mid-second millennium BC. However, Homer[33] says that such an archaic and unwieldy weapon made of bronze and seven layers of bull leather was used during the Trojan War by the warlike and extraordinarily strong Achaean warrior Ajax, called the Great (Fig. 5.4:2). Miniature figure-of-eight shields were frequently represented in jewellery (beads and pendants, seals and rings), served as decoration on toiletry vessels (alabastra and pyxides), and as buttons and dress appendages. Much of the visual and symbolic elaboration of the figure-of-eight shield occurred after the weapon itself had become obsolete. They had strong iconic and symbolic value, suggesting magical or apotropaic values, the signification of sacred space, association with fertility and regeneration, hunting, sacrifice, and the cult of a Minoan nature goddess; an insigne or aniconic form of a warrior goddess, cultic status *per se*, emblem of (male) military elites or even a reference image for heroic and mythical narratives.[34] On the basis of iconography one should notice that longitudinal central reinforcements appeared on some shields. They resemble *spinae* form Celtic shields which are described below. Further studies are required to find out whether they were used in parallel with shields without the ribs or if there is a succession between these forms.

Figure-of-eight shields lost their popularity as a result of a Late Mycenaean breakthrough in fighting style during the thirteenth–twelfth centuries BC. At this time, metal armour began to be used on a wider scale.[35] Since then, such shields occurred much less frequently and their size decreased. Their descendants were somewhat smaller hourglass-shaped shields (of Type Dipylon, tenth–eighth centuries BC — Fig. 5.4:3), then replaced by oval ones, with excisions on their sides, known as Boeotian type shields. The greatest number of depictions of such shields is known from Boeotian coins (Fig. 5.4:4), and they were in use until the early fifth century BC. Their construction was probably lightweight, and they were useful both in individual combat and in battle formation. Their prototypes are sometimes searched for in a period as early as the second millennium BC.[36] Such shields are solely known from iconography, but from the way they were held it seems obvious that they were equipped with grips. Round bronze shields were also used in Greece and they are present in archaeological record. These were similar to the aforementioned forms that were characteristic of large areas of Europe. As regards the Late Mycenaean Period, round shields and the so-called inverted *pelte* also came into use. The latter was a crescent-shaped shield, carried with the excision downward. Both types were likely made of wicker covered with leather[37] and used by light infantry. The shape of the *pelte* was in all probability meant to allow for unrestricted and dynamic movement during combat, as it left plenty of room for the legs. Such an inverted *pelte* was depicted on the famous Warrior Vase from the acropolis in Mycenae, dated to the thirteenth century BC (Fig. 5.4:5). In the later period, classic *peltes* that were bent with their corners upward were used by lightly armed skirmishers who attacked the enemy with small javelins. Peltasts from Thracia were especially renowned (Fig. 5.4:7)[38] and they often served in Greek armies of the Classical Period (fifth–fourth centuries BC).

Small and medium-sized round shields with shield bosses were also depicted on bronze figurines, so-called *bronzetti*, dated to about 800 BC, which are known from the Nuragic Culture in Sardinia (Fig. 5.4:6).[39] However, the Greek *hoplon* (*aspis*) is much more recognizable. It was the eponymous weapon of the hoplite infantry (Fig. 5.4:8–9), but its roots were earlier.[40] Such shields were round and large, and their surfaces were slightly convex, bowl-shaped. They protected the warrior from the chin to the knees and were made of wood covered with leather and reinforced with bronze, especially on the edges. They were in use from the eighth to the third centuries BC. The considerable size of the shields enabled the use of the linear array of the phalanx, where the warrior protected partially himself and the comrade on the left with his shield. The other edge of the *hoplon* was covered by the shield of the warrior on the right. This required iron discipline and trust in one's comrades-in-arms, and there was no room for Achilles-like skirmishers in such a formation. The discussed array formed a shield wall that was slightly oblique, and adversaries were attacked with spear thrusts from behind it. The *hoplon* had no shield boss, which was not necessary for this style of combat, but it was provided with as many as two shield grips. The first embraced the forearm near the elbow and the other was held in the hand (Fig. 5.4:8). Thanks to this, it was possible to carry this heavy shield (about 8 kg). Due to

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identity — Molloy 2012, 99 — but this is not convincing if one takes into account later examples of similar use of shields in the Antiquity.

[33] Homer, *Iliad*, VII. 210.

[34] Nikolaidou 2020.

[35] Molloy and Horn 2020, 121.

[36] Georganas 2012, 311–12; Deligiannis 2009; Greenhalgh 1973, 64–74; Rawlings 2007, 57–58.

[37] Rawlings 2007.

[38] Webber 2003, 540–41, with further reading.

[39] Tronchetti 1997, figs 1, 4; Piras 2006, 187–88 fig. III:10; Maraszek 2015, 263.

[40] Sekunda 2000, 16–22; Connolly 1988, 53–54; Kagan and Viggiano 2013, xi–xv; Bardunias and Ray Jr 2016, 24–35.

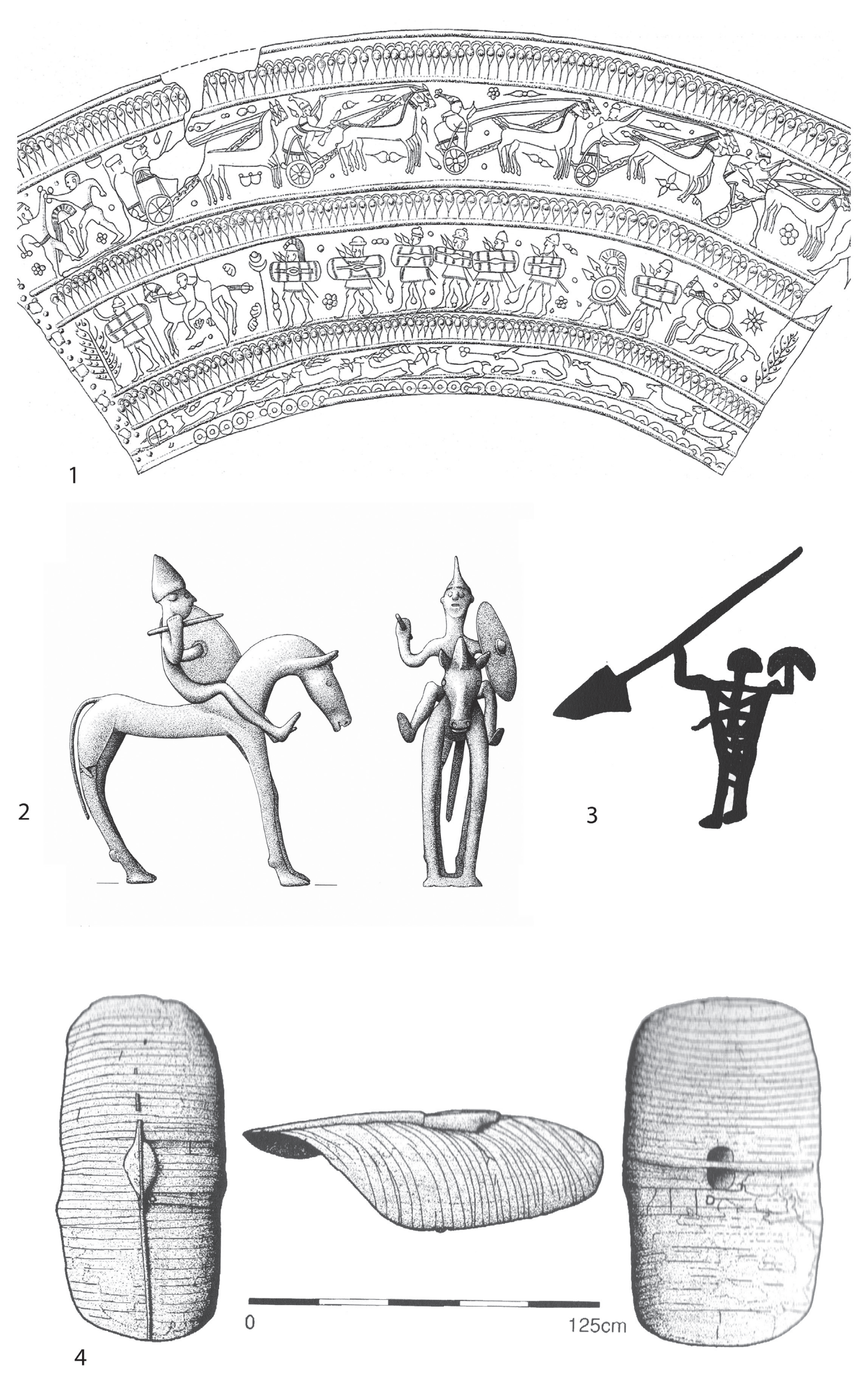

Figure 5.5. Iron Age shields. 1 — depiction of Hallstatt Culture shields on a situla from Bologna-Arnoaldi; 2 — horseman's shield from the Hallstatt Culture Cult Wagon of Strettweg; 3 — depiction of a warrior with a parrying shield (?) on a petroglyph from Valcamonica; 4 — Roman shield from the Republican Period from Qasr al-Herit in the Faiyum Oasis (1 — after Lucke and Frey 1962, pl. 2; 2 — after Egg 1996, fig. 12; 3 — after Anati 1964, fig. 29; 4 — after Bishop and Coulston 2006, fig. 30:1).

its considerable weight, a strike with the convexity of the shield could throw the adversary off the balance, while strikes with the edge could crush the skull or break the limbs of a prostrated enemy.[41] Loops for hanging on the arm were still applied, and they were in use during marching. Abandonment of the shield meant disgrace, hence the famous Spartan farewell to a son going to war: 'come back with your shield [that is, victorious] — or on it [fallen, but not disgraced].'

It is interesting that *hoplons* may have also been in use farther off to the north, in the so-called Hallstatt milieu in the Early Iron Age (about 800–475 BC). Some depictions on two bronze situlae from about 500 and the fifth century BC (Certosa, Bologna-Arnoaldi) display warriors armed like hoplites, with shields that were typical of them (Fig. 5.5:1). It is supposed that these warriors may have been instructors or mercenaries who were introducing the Greek style of fighting in formation — the aforementioned phalanx[42] — to detachments of unknown Hallstatt Culture kings or chieftains. On the other hand, a majority of combatants depicted in the situlae use native weaponry, including oval (rectangular-oval) shields with marked shield bosses. Similar shields (Fig. 5.5:2) can be seen on figurines of horsemen from the famous cult wagon discovered in the splendid grave in Strettweg, Austria (*c.* 600 BC).[43]

Some Hallstatt Culture shields can be considered prototypes of Celtic solutions from the La Tène Period. What is meant here are oval forms or — more sporadically — those whose shapes were similar to a rectangle with rounded corners. Such shields were provided with a rib (*spina*) running lengthwise through the centre of the board. This rib strengthened the structure of the shield (Fig. 5.5:1). Such shields were broadly used by the Celts in the La Tène Period or by the Romans in the time of the Republic.[44] Analogous or similar solutions (without ribs, but with barleycorn bosses) were known in the area extending from Britain to the Levant.[45] This kind of shield was probably first introduced in the territory of the Villanova Culture in Early Iron Age Italy as early as the eighth century BC. From there, it found its way to the Celts and was adopted by Rome (Fig. 5.5:4).[46] The Celts were using such shields at least from the end of the sixth century BC, as demonstrated by a sculpture from the cemetery in Vix.[47] Due to the effectiveness of Celtic warriors, they were eagerly employed in Mediterranean armies. This is also evidenced — aside from ancient narratives[48] — by finds of Celtic weaponry or images of Celts in Mediterranean art beyond the territory of the compact Celtic settlement.[49] Battles against adversaries from different cultures, armed in a variety of ways, demonstrated that the Celtic shield required improvements. The first metal fittings of shields appeared in the Celtic milieu at the beginning of the fifth century and they became widespread by the end of the fourth century BC. During this time, reinforcements made from iron sheets came into use, having been attached with nails in the middle of the rib's convexity, that is in the place that was the most exposed to strikes (both parried and delivered). Such reinforcements, however, were soon replaced with another solution, a so-called butterfly-shaped shield boss. It covered the central convexity but was attached to the shield board (Fig. 5.6:1, 2, 4). This was in all probability due to the previous model being found to be insufficiently resilient. Nails were exposed to strikes and thus they soon fell off or penetrated the wood so deeply that the use of the shield became difficult. This modified construction proved very durable. The Celts were so attached to it that they used such shields as late as the first century BC. The shape and size of the wings were modified over time, but the core design remained unchanged.[50]

In general terms, shields of the same design were in use with the Roman army in the Republican Period.[51] It was first at the end of the first century BC that such forms began to be replaced in Rome by a more convex

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[41] Cf. Randall 2011, 113–14, 124–27.

[42] Chochorowski 1999, 372; Travis and Travis 2014, 44 fig. 28; cf. Tomczak 2012, 48, 53 figs 3, 8 — these are, however, unconvincingly interpreted as Roman weapons.

[43] Cf. Egg 1996, 22 fig. 12, pl. 9.

[44] Bishop and Coulston 2006, 61–63; cf. especially depictions of shields in the altar of Domitius Ahenobarbus, consul in 122 BC — Coarelli 1968, 302–68 — and in the frieze from a victory monument erected in Delphi by Lucius Aemilius Paullus following his defeat of the Macedonian king Perseus at Pydna in 168 BC — Kähler 1965, 27 pls 6:31, 14. However, it is a shield discovered in Qasr al-Harit in the territory of the Faiyum Oasis which is of special interest — Kimming 1940. The latter artefact (Fig. 5.5:4) was certainly not manufactured locally, as birchwood it was made of does not occur in northern Africa. This shield was initially believed to have been the property of a Celtic mercenary. It has been recently proposed that this is a Roman-made artefact. What speaks for this is not only a complex technology of manufacture (the use of plywood fastened at various angles in order to increase the shield toughness) but first of all its shape of a cylinder portion that protected the sides of the soldier fighting in battle array. This shape was atypical of the Celts who used flat shields in their offensive-style combat.

[45] Stary 1981, 287.

[46] Stary 1981, 290–98.

[47] Chaume and Reinhard 2011, 303 fig. 8:a, 12:c.

[48] Rapin 1991, 333–36.

[49] These finds also include shield parts, see Rapin 2001, 291–94 fig. 7.

[50] Eichberg 1987; Rapin 1991, 323–25, 327; 1999, 37, 46–47, 55, 59, 63 figs 3:A, C; 5:B; 9:B–D; 10:b; 12; Bochnak 2006, 166–67; see also an earlier work — Brunaux and Lambot 1987, 130–31.

[51] Cf. n. 44.

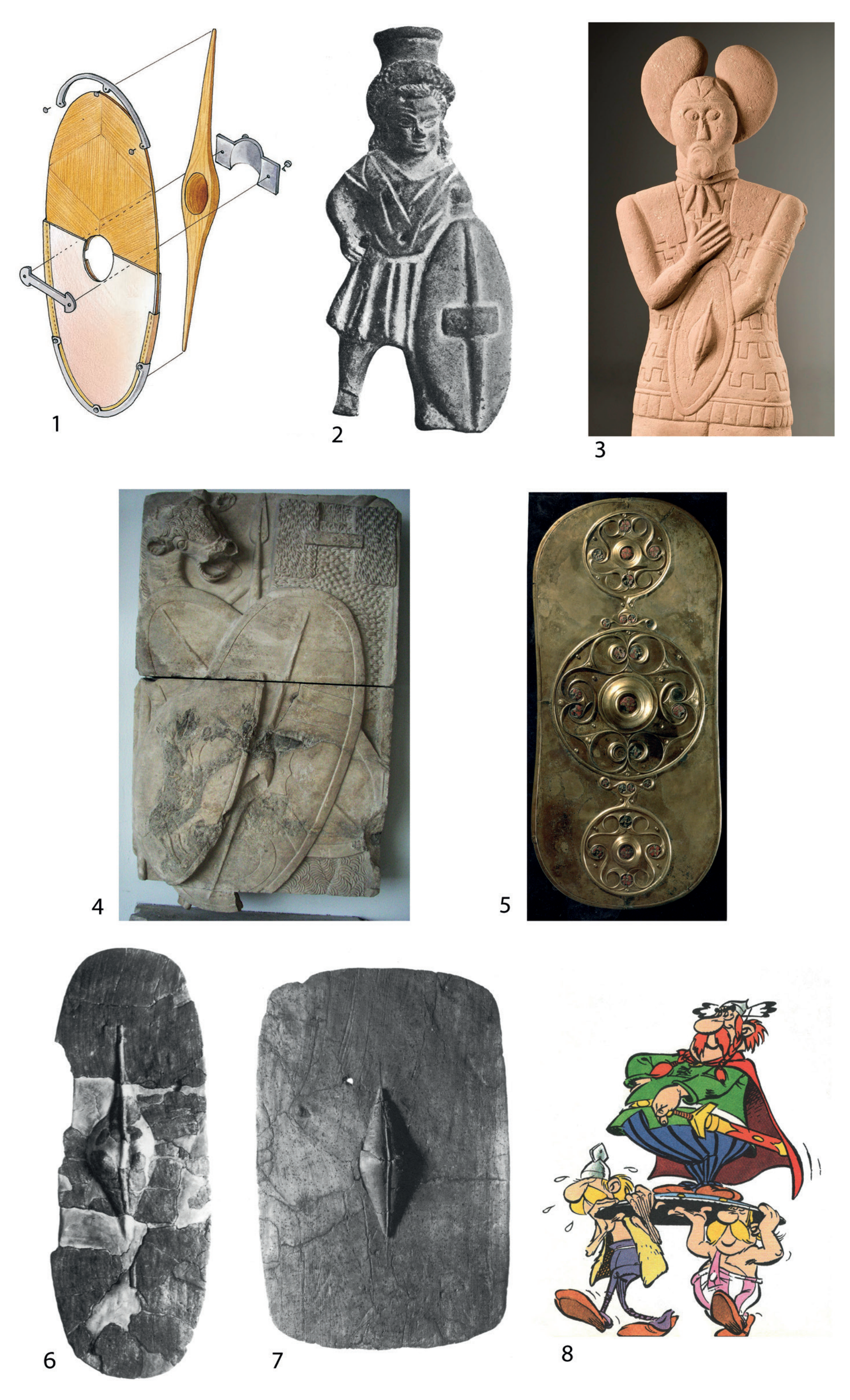

Figure 5.6. Shields from the La Tène Period and the Pre-Roman Period and their depictions. 1 — reconstruction of a Celtic shield; 2 — Greek terracotta figurine of a Celtic warrior, found in Egypt (Collection Fouquet); 3 — figure of a Celtic warrior from the princely grave in Glauberg; 4 — Celtic weaponry in the frieze of the Temple of Athena Nikephoros in Pergamon; 5 — parade shield from Battersea; 6–7 — wooden shields from Hjortspring; 8 — Chieftain Vitalstatistix on a shield (1 — after Quesada 2011, fig. 79; 2 — after Bieńkowski 1928, fig. 197; 3 — photo P. Odvody, hessenARCHÄOLOGIE, after Trefný and others 2022, fig. 2, CC BY 4.0; 4 — collection of the Pergamonmuseum in Berlin, photo author; 5 — after Farley and Hunter 2015, fig. 26; 6–7 — after Kaul 2003a; 8 — after Goscinny and Uderzo 2013)

design with a circular shield boss.[52] In the Hellenistic Period they were also borrowed by the Greeks (both infantry and cavalry) from the Galatians during their raids into Greece from 281 BC onwards or by Pyrrhus's army from his Oscan allies or Roman enemies, who both used the *scutum*, during his Italian campaigns of 281–275 BC. The Greeks called such a shield *thureos*, meaning 'a door', due to its large size. They remained in use from the early third century BC until the Augustan times.[53] The relationship between the Celtic shields and the Roman *scutum* is unclear. Some scholars suggested that it had been used in Italy from Prehistoric times and was perhaps later borrowed by the Celts[54] but the sequence of events remains uncertain.[55] Theoretically, one may even take into account the Aegean figure-of-eight shields with vertical ribs as the earliest possible predecessors of the aforementioned forms with a spine.

When the discussed construction is compared with proto-shields that were dealt with at the beginning of this chapter, it may be surprising to note that the rib is actually identical in both cases. Thanks to technical analogies known from ethnographic sources it seems that shields with ribs originated as a development of parrying sticks. Although it has been proposed that the spine may be a technical vestige of leather shields reinforced with wooden 'backbones',[56] this by no means contradicts the proposed idea, but rather completes it. What is especially striking is a convergence of a shield depicted on a stone sculpture discovered near a splendid grave from Glauberg in Hessen. The sculpture displays a ruler-warrior holding a small shield (Fig. 5.6:3).[57] This is an almost perfect replica of a small shield which co-occurred with fighting stick. This example, however, does not necessarily confirm the use of such shields in the Celtic milieu of the second half of the fifth century BC. This is due to the fact that the size of the depicted shield was the result of artistic choice, and not an intention to faithfully render the weapon's actual dimensions. In fact, it may have been intended to display a much larger artefact. Further evidence can be seen in the Iron Age rock engravings from the Valcamonica in the Italian Alps, which depict, among other things, figures of warriors with micro-shields[58] or those engaged in a duel (some scholars assume that these represent a warrior dance). The figures wear helmets and hold short sticks (knives?) in one hand and artefacts resembling proto-shields in the other hand (Fig. 5.5:3). Is this an explanation for why shields with ribs were invented in the north Italian Villanovan Culture? This is a tempting idea, but the rock engravings are too schematic to conclusively resolve this issue.

Some boards of Celtic shields were made from several pieces of wood. These were assembled in such a way that strike resistance could be increased, such as an arrangement of horizontal strips or in a herringbone pattern. Anyway, the use of such solutions is already demonstrated by shield depictions on the Late Hallstatt Period situlae from Klein-Klein in Austria.[59] In the La Tène Period, they are known from the frieze of the Temple of Athena Nikephoros in Pergamon from the first half of the second century BC (Fig. 5.6:4),[60] from coins of the Pictones (the 50s–60s BC) with the name of VIPOTAL[OS] or VIIPOTAL (VEROTAL),[61] and from a sculpture of a Celtic warrior in Mondragon in Provence (late first century BC).[62] In the latter case, the shield on which the warrior supports himself must have originally been made from at least eight parts assembled at an angle. This is demonstrated by the course of wood grains, which can be perfectly seen in the stone. This procedure was aimed at increasing the shield's durability. A sword strike could damage one part, but not other ones, whose grain arrangement was different.

The Celts also used bronze shields. These were very decorative (that is ornamented with curved lines and animal images which were embossed and inlaid with coral or enamel) and were meant for cult or parade use. The animal images were to provide shield owners with protection (snakes) or strength (wild boars). Especially well known are river sacrificial finds from the Witham River, as well as from Battersea (Fig. 5.6:5) and Wandsworth on the Thames River.[63] Besides these, in Gaul and in Britain there are finds of bronze miniatures of shields that were presented as votive offerings in temples. Such finds still occur as late as during Roman rule.[64] From these, it is possible to reconstruct the shape of full-scale artefacts.[65]

The above considerations do not mean that the shield with a central rib was the only European solution. In northern and central Europe, oblong shields were known and used as early as the Early Iron Age. These were made from single boards, to which barleycorn shield bosses were attached; these bosses were a kind of an undeveloped *spinae*. Such shields are depicted

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[52] Nabbefeld 2008, 26.
[53] Sekunda 2006.
[54] Maule and Smith 1959, 6; Feugère 1993, 92.
[55] See Sekunda 2006, 9.
[56] Stary 1981, 288.
[57] Hermann 1996; Chaume and Reinhard 2011, figs 15–16.
[58] Anati 1964, fig. 29, 141.
[59] Cf. Anati 1964, 294 fig. 2.
[60] Rapin 1991, 335; Mert 2006, 156 fig. 18.
[61] Rapin 1991, 324; Brunaux 2001, 6.
[62] Krön 1980, 123 fig. 13; Rapin 1991, 320.
[63] Farley and Hunter 2015, 1, 18, 85 figs 9–10, 17, 26, 62, 67.
[64] Andrzejowski 2000, 36–37, 39–40 figs 4–6, with further reading.
[65] Farley and Hunter 2015, 85 fig. 68.

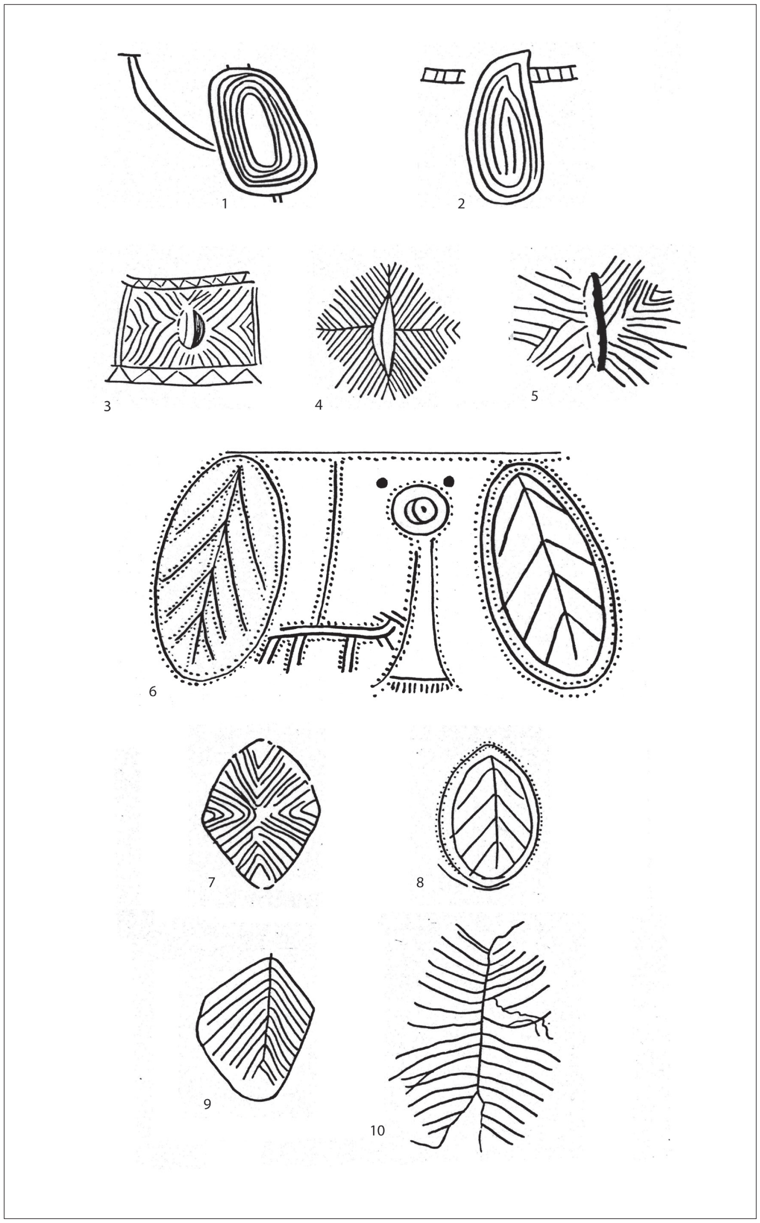

Figure 5.7. Shield images on the urns from the Pomeranian Culture. 1 — Strzelno/Samostrzel; 2 — Mała Wieś; 3 — Zwartowo; 4 — Gdynia-Redłowo; 5 — Ostróżki; 6 — Starogard Gdański; 7 — Kielno; 8 — vicinity of Starogard Gdański; 9 — Wierzbica Szlachecka; 10 — Łapino (after Sylwestrowicz 1979, figs 15, 22:a–b, 23, 24:a, 25, with further reading).

on a number of face urns of the Pomeranian Culture (Fig. 5.7).[66] It is also possible that shields made from 'slices' cut from a tree trunk and with no bosses were in use. Furthermore, depictions of shields with the herringbone pattern, both with spindle-shaped shield bosses and without them, are also known. The pattern implies that these shields were composed of many separate pieces of wood.[67] This, however, is not always probable. What one is rather dealing with here are depictions of shield ornaments, as the motif of herringbone angles is well recorded in the Pomeranian Culture. What is more, V-shaped plank patterns in the shield construction would be counterproductive, as they could fissure more easily than in the case of a straight arrangement. In order to reinforce the shield, its components should be arranged in the position of a reversed V, as can be seen on the shield from the statue in Mondragon.[68] On the other hand, swords seem to be very rare in the Pomeranian Culture, thus severe blows threatening the shield's consistency might not have been a real danger.

Numerous shields are known from the bog offering site in Hjortspring on the Danish island of Als (second half of the fourth century BC). These finds, over sixty in number, are the only ones that are entirely preserved. They were chiefly made from homogeneous boards (Fig. 5.6:7), and in one case the spindle-shaped shield boss makes a whole with the board, as the shield was manufactured from a single massive piece of wood (Fig. 5.6:6).[69] Similar constructions were used in southern Scandinavia earlier, which is proved by the barleycorn umbo from the well in the settlement in Kvärlöv (Skåne) with the radiocarbon dating of cal. 780–400 BC.[70] Is it possible that Pomeranian Culture shields which come from the same period as the aforementioned discoveries were much more complex? Although there is a prevalence of oval shields in the iconography of face urns, the Hjortspring shields were rectangular. Their corners were rounded to varying degrees and their side edges were more or less arcuate (sometimes the shape was somewhat close to an elongated oval). Shields of the same shape can be found in contour depictions in Scandinavian petroglyphs of the Pre-Roman Period in Litsleby-Tegneby in the Bohuslän Province. They are displayed in the hands of both foot and mounted warriors.[71] Rectangular shields can also be seen in rock engravings from the Iron Age in Valcamonica,[72] although some images also depict round (?) shields shown in profile.[73] Pre-Roman Period shields may have been covered with a layer of leather in order to increase their durability. This is suggested by a discovery from the mid-fourth century BC that was made near a fortified settlement from the Pre-Roman Period in Borremose (northern Jutland). A leather flap of rectangular shape with slightly rounded corners was found there. It was a shield cover, which is demonstrated by a central opening for the shield boss and grip. Around the opening there were traces of arcuate patterns impressed in the leather.[74] This artefact is similar to the finds from Hjortspring with regard to shape. There is no doubt, however, that reinforcing with a leather flap was uncommon, as traces of a similar cover were not found in any of the shields from the deposit on the island of Als.

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[66] La Baume 1963, 23–25; Stary 1981, 299–300 fig. 3; Kwapiński 2005, 311–12.

[67] La Baume 1963, 24; see Kontny 2021d.

[68] Cf. Sylwestrowicz 1979, 16, 28 fig. 21; Bochnak and Bochnak 2012, 74.

[69] Numerous shields were discovered there and they were almost exclusively made of lightweight wood (alder, lime, birch). In over fifty cases it was possible to reconstruct the shape. The dimensions of the largest shield were 88 × 50 cm, while those of the smallest one were 66 × 29 cm. In most cases, the shield sizes were about 70–75 × 45 cm. Taking diversified proportions of length and width into consideration, three shield types were identified. No metal parts were used in their construction — Rosenberg 1937, 106–09 figs 26–30; Kaul 2003c, 152–53, 171–73 figs 4.8, 4.9.

[70] Martens 2001, 140 fig. 5.

[71] Kaul 2003b, 205–06 figs 5.31, 5.33, 5.34, 5.35; Ling 2014, 203.

Apart from oblong shields with *spinae* or with barleycorn bosses, round shields were also in use in Europe in the Pre-Roman Period. These were used by the Celtiberians in the Iberian Peninsula,[75] although typical Celtic shields can also be found there.[76]

Celtic forms seem to have remained in use for many years. However, around 200 BC other Barbarians, namely the Germanic peoples, introduced a different shield standard. This model was initially recorded in the Przeworsk Culture. In the Celtic world, it first came into use (albeit to a limited extent) in the Late La Tène Period, from the end of the second century BC. This solution was first implemented by the East Celtic tribes, while the West Celts adopted it much later.[77] The new construction had no rib, the board was flat and there was an opening in its central part. An iron shield boss that was circular in plan was fixed over this opening with the use of nails or rivets. It protected the hand holding the grip, which was attached to the board from the inside. Such shields were usually elongated, resembling hexagons or rectangles. Their sides were sometimes slightly convex. Shields of this kind were assembled from many planks[78] and at least some were covered with leather, which greatly increased their strike resistance. Such construction allowed for offensive combat, which was used to a great degree by the Celts. However, over time the bosses of Germanic shields were shaped in such a way that they were increasingly effective in striking. This is evidenced by the fact that in the Late Pre-Roman Period hemispherical shield bosses were replaced with conical ones, and then the conical were replaced with those provided with blunt apexes on tops.[79] A strike to the face with such a shield boss must have had a terrible effect. The offensive use of shields is known among various peoples. For instance, the Philippine Kalinga used wooden rectangular shields called *kalasag* imitating the human silhouette, provided with triple protrusions-teeth. Their purpose was also practical, not ornamental.[80] What is more, warriors of the Zulu king Shaka had a habit of hooking the edge of their own shields against the adversary's shield and then throwing them off balance with a strong pull. Then, they stabbed at the adversary's side with short *assagai* spears.[81]

The shield was the main weapon of many Germanic peoples of the Roman Period and the Migration Period. This is confirmed by numerous passages in Tacitus's *Germania*. While discussing the warrior's equipment, the Roman historian says: 'et eques quidem scuto frameaque contentus est, pedites et missilia spargunt' (As for the horse-soldier, he is satisfied with a shield and spear [*framea* — a universal weapon that could have been used both in close combat and for throwing — author's remark]; the foot-soldiers also scatter showers of missiles).[82] In another place it is clearly indicated that giving a shield to a young male is a form of initiation. Tacitus says:

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[72] Anati 1964, figs 131, 136, pl. 52; Marretta 2013, figs 3–5, 8.

[73] Anati 1964, fig. 52, 151 pl. 54.

[74] Kaul 2003c, 171; Warming and others 2016, 202–03 fig. 6, table 10.

[75] Lorrio Alvarado 2016, figs 1, 5, 22, 24.

[76] Lorrio Alvarado 2016, fig. 12.

[77] Bochnak 2006, 180–86. It seems, however, that circular shield bosses made of leather may have been used by the Celts, at least insular ones (maybe as a result of surviving Bronze Age traditions). This is suggested, for instance, by the Enderby shield from Everards Meadows in Leicester, found in 2015. Made of bark (willow, poplar, hazel, or spindle tree) it was equipped with a willow core umbo sewn onto the board. The board was painted and scored in red chequerboard decoration using a hematite-based paint. Its surface was damaged from the pointed tips of spears. It is dated by radiocarbon method to 395–255 BC (Beamish 2019). Another discovery comes from Clonoura, Co. Tipperary in Ireland. A possible La Tène Period shield (its chronology is not firmly established and is based on the similar shield construction from the La Tène Period cemetery at St Peters Port, Guernsey) that was found in the Littleton bog was manufactured from thin planks which were covered with leather. The shield was provided with a leather boss and reinforcements of the edges. The latter are legible for nearly entire circumference. This was certainly not exclusively a ceremonial shield, as its use in battle is demonstrated by cut traces that can be seen on the leather — Raftery 1989, 121–22 fig. 8:6; Cunliffe 2003, 121 fig. 50. But ceremonial metal shields confirm such construction with a circular central boss as well, see Battersea (350–50 BC) and Wandsworth (300–200 BC) shields, both from the Thames River — Farley and Hunter 2015, 57 figs 10, 26, 31, 62. Insular Celts also used another peculiar type of shield: hide-shaped, i.e. oblong, with concave shorter sides which is proved by miniature shields and finds of metal edging trim in graves, dated to the second and first centuries BC — Stead 1991; Travis and Travis 2014, 41–42.

[78] This is indicated by different lengths of shanks of nails that attached the shield boss. The longest fixed the boss with a plank at some distance from the shield centre — Jahn 1916, 156–57 fig. 177.

[79] Cf. Bohnsack 1938, fig. 36; Bochnak 2005, 106–08 fig. 35; Łuczkiewicz 2006, 76–97.

[80] Dozier 1966, 131; Casal and others 1981; Lee Junker 1999, 352 fig. 12:3.

[81] Morris 1966, 38, 47.

> sed arma sumere non ante cuiquam moris, quam civitas suffecturum probaverit. Tum in ipso concilio vel principium aliquis vel pater vel propinqui scuto frameaque iuvenem ornant: haec apud illos toga, hic primus iuventae honos.
>
> (It is not, however, usual for anyone to wear arms till the state has recognized his power to use them. Then in the presence of the council one of the chiefs, or the young man's father, or some kinsman, equips him with a shield and a spear. These arms are what the toga is with us, the first honour with which youth is invested.)[83]

What is more, the loss of the shield during combat had not only immediate consequences (a need to leave the battlefield as soon as possible) but also far-reaching ones. The latter were perhaps more grave, as Tacitus states:

> scutum reliquisse praecipuum flagitium, nec aut sacris adesse aut concilium inire ignominioso fas, multique superstites bellorum infamiam laqueo finierunt.
>
> (To abandon your shield is the basest of crimes; nor may a man thus disgraced be present at the sacred rites, or enter their council; many, indeed, after escaping from battle, have ended their infamy with the halter).[84]

This is perhaps *interpretatio romana*, as abandoning the shield is an old motif in the Mediterranean tradition, but the shield was, indeed, of paramount symbolic importance for the Germanic people.[85] It was manifested in, for example, the ritual of electing a leader, which was confirmed by raising him on a shield. During the Batavian revolt, a certain Brinno was proclaimed chieftain of the Cananefates in this way.[86] The same was done by the Roman army in Gaul nearly three hundred years thereafter, when Julian the Apostate was made emperor in 361.[87]

In the course of time, this habit became part of the Byzantine coronation tradition, which can be seen in written sources and iconography.[88] However, it did not disappear in the Germanic world. It is believed that Pharamond, a legendary Frankish king from the turn of the fourth and fifth centuries, obtained his royal dignity by means of being raised on the shield.[89] In the early sixth century, Clovis succeeded to the throne after a Frankish kinglet Sigibert,[90] and later on Gundoald was made ruler of Aquitaine in 584 in a similar manner. However, the latter lost his balance during the ceremony, and his retainers were barely able to catch him.[91] This was an evident sign of bad luck. Gundoald was considered a usurper and he was dead a year thereafter. What is more, Cassiodorus says that Vitiges the Ostrogoth was raised to royal status in such a manner on the battlefield.[92] This phenomenon is also known in its popular culture form from the comic books of René Goscinny and Albert Uderzo about the adventures of the Gaul warrior Asterix. One of the protagonists of this story — a chieftain named Vitalstatistix (in other language versions: Abraracourcix or Maiestix)[93] — is steadily carried by his assistants on a shield (Fig. 5.6:8). However, quite often he unintentionally 'dismounts', with unfortunate results.

What did such shields look like? There is certainly no simple answer to this, as a great deal of fundamental data is missing. Due to the fact that cremation rites were dominant in Barbarian Europe, shields which were deposited into graves have not survived until the present. Furthermore, in the case of inhumation graves there is also little chance that organic parts of weaponry survived. This is why bog finds are the main source for the reconstruction of shields. In this context, a discovery from Vædebro in eastern Jutland is of utmost interest (Fig. 5.8:1). What was found there was, i.e. a wooden shield made from a single (!) alder plank. Its dimensions were 105.5 × 38.5 cm and it was 0.5–1.0 cm thick. Traces of painting survived on the shield, and in its corners there were remains of reinforcements, in all probability made of wicker. Point cavities in the meander arrangement could be seen on the surface. These do not have any obvious close analogies. However, Jørgen Ilkjær[94] says that they may imply that a leather covering was attached to the shield's surface.[95] Another part of the shield

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[82] Tacitus, *Germania*, VI.

[83] Tacitus, *Germania*, XIII.

[84] Tacitus, *Germania*, VI.

[85] Kolendo 2008, 118.

[86] Tacitus, *Historiae*, IV. 15.

[87] Ammianus Marcellinus, *Rerum gestarum*, XX. 4. 17.

[88] Walter 1975; Teitler 2002.

[89] *Liber historiae Francorum*, 4–5.

[90] Gregory of Tours, *Historia Francorum*, IV. 51.

[91] Gregory of Tours, *Historia Francorum*, II. 40.

[92] Cassiodorus, *Variae*, X. 31. 1.

[93] Teitler 2002, 501–02.

[94] Ilkjær 2001, 359.

[95] Similar cavities – stitching-holes – along the edges were noticed on shields from the Nydam bog site — Ilkjær 2001, 359, 378; Petersen 2020, 152–53 figs 4.13, 4.14.

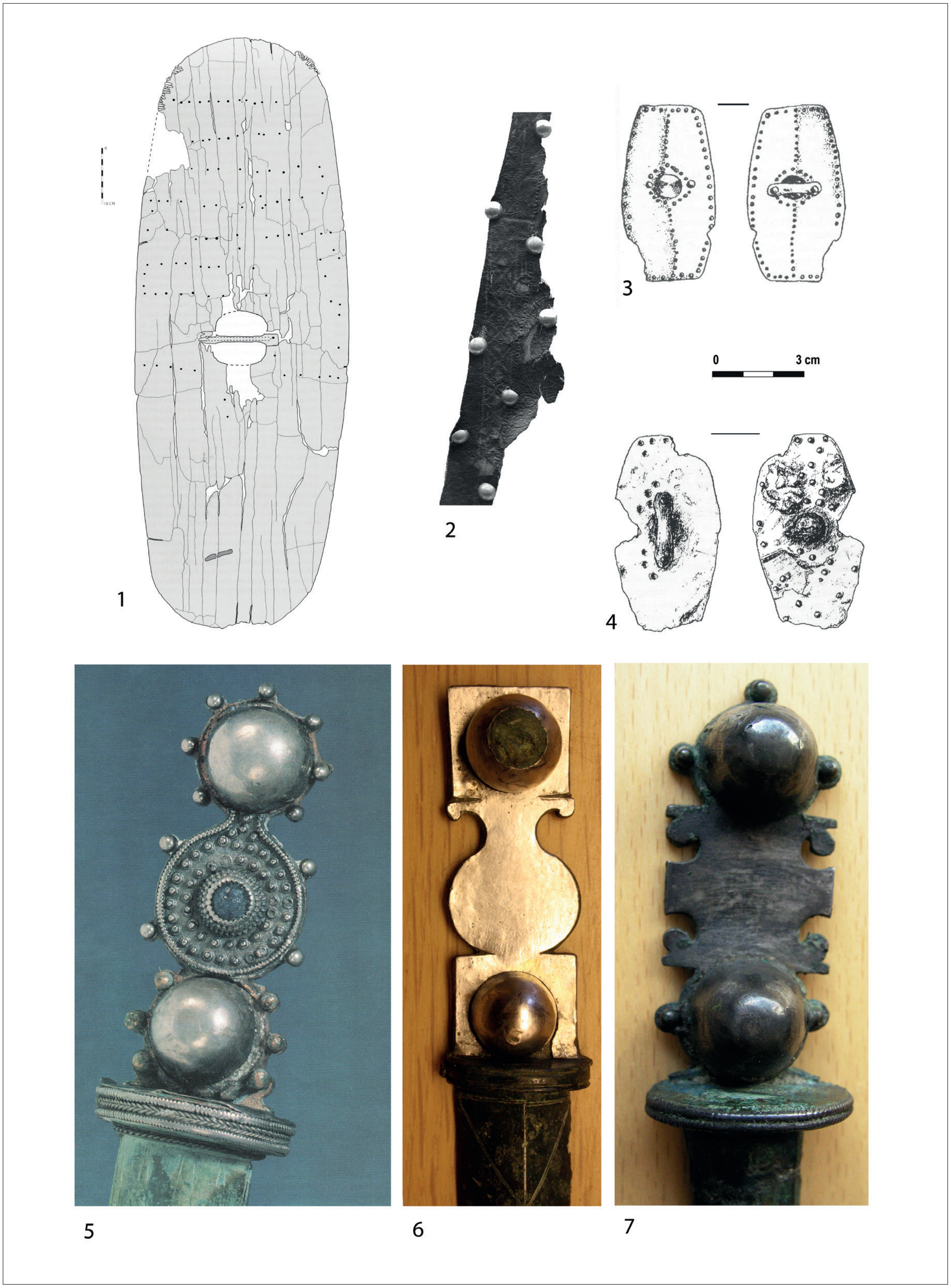

Figure 5.8. Barbarian shields from the Roman Period, their depictions and decorations. 1 — shield from Vædebro; 2 — shield fragment from tombs discovered on 26 April 1904 in Kerch; 3 — shield miniature from Grave 39 in Siemiechów; 4 — shield miniature from an unknown grave in the necropolis in Siemianice; 5 — shield grip ornament from Grave 1 in Brostorp, Glömminge Parish in Öland; 6 — shield grip ornament from Grave 2 in Hunn, Borge Commune in Norway; 7 — shield grip ornament from Rådved, Horsens Commune in Denmark (1 — after Ilkjær 2001, 319; 2 — after Kontny 2008b, 6:d; 3–4 — after Andrzejowski 2000, fig. 2.3, 6; 5 — after Rasch 1991a, fig. on p. 151; 6–7 — collection of the Historical Museum in Oslo, photo author).

was a narrow band-shaped iron grip of Type Jahn 5,[96] which dates the find to the end of the Late Pre-Roman Period or the beginning of the Early Roman Period.[97] This implies that shields with undivided boards were in use as late as the turn of the era.

The shape of shields from the Early Roman Period is usually reconstructed on the basis of finds of edge fittings, which are quite frequent in grave furnishings from Phases B1–B2a.[98] Provided that such fittings are numerous enough, such a reconstruction can be successful.[99] Possible deformations and destruction of metal fittings in the fire of the funeral pyre must be borne in mind, and the same applies to post-depositional processes. Moreover, it seems that small fragments of fittings may have been omitted or overlooked while parts of grave goods which were to be deposited into the grave pit were picked from the funeral pyre. The same may have also occurred in the course of excavation works, e.g. if the exploration was carried out without metal detectors. These factors are considerable constraints on the reconstruction of the shield's shape. In the case of discoveries from the territory of the Przeworsk Culture, this may incline the researcher to pessimistic conclusions.[100] Edge fittings are very rarely found in 'kits', which implies that in most cases it was not the entire circumference of the shield that was reinforced in such a manner. Instead, the manufacturers perhaps focused on parts that were the most exposed to strikes. It should be also noted that this solution was not particularly durable. It can be said that edge fittings were rather meant to attach leather that was covering the shield than to reinforce its edges. As demonstrated by experiments with replicas of Scandinavian shields, leather covering perfectly increased mechanical resistance to strikes.[101]

In spite of these reservations, the analysis of finds from other territories of central and north European *Barbaricum* allows for some kind of generalization.[102] Thus, it must be said that in the Early Roman Period there is a vast preponderance of not very large oblong shields (hexagonal, rectangular, or with an outline similar to a rectangle, as well as possibly in the shape of an elongated oval). Such shields were adapted for close combat, and their offensive function was prominent. What may be an exception to this rule are reconstructions that provoke doubts (Bornitz and Prositz in Germany, Káloz in Pannonia), as well as some Scandinavian shields (Brostorp, Grave 4[103] and the inhumation grave from Hörninge[104] — both in Öland; Hvesager[105] in eastern Jutland). These last ones, regarding their considerable size, may be a harbinger of changes in the way shields were used in northern Europe, discussed further in the text. An intermediate position is held by a shield from a plundered 'royal' grave in Mušov in Moravia.[106]

There is yet another source for the reconstruction of shield shapes from the Early Roman Period: miniatures that were used as amulets. These are encountered in women's graves in the Przeworsk Culture, and one find is also known from the Wielbark Culture.[107] Due to the fact that technical details were shown on them in a precise way, it can be seen that shield grips were usually attached horizontally, and only in exceptional cases they were aligned vertically. As a consequence, the wrist was less prone to stress during strikes. What is also of interest, are lines composed of point convexities which usually run along the edge or through the centre of the shield, and sometimes also around the shield boss. These are perhaps depictions of rivets or organic pegs that attached the leather layer (Fig. 5.8:3–4). Such rivets or pegs are analogous to the aforementioned find from Vædebro,[108] and they were also found in the tomb in Kerch (Fig. 5.8:2) which is dated to the Early Migration Period. In this location, on 24 June 1904 treasure hunters discovered, among other items, an oblong hexagonal shield. It was covered with leather and provided with an ornament in the shape of figural scenes.[109] Thus, that might have been a way of reinforcing the shield with a leather cover that was an alternative to gutter-like fittings. The shield model from Grave 46 in Siemiechów additionally displays four symmetrically arranged larger fields that were surrounded with points (Fig. 2.17:2). There is hardly any technological explanation for them, and they were rather meant to display ornamental knobs that were studded onto the shield board. Similar decorations are known from Scandinavian military leaders' shields that were discovered at the bog site in Illerup, and they are also known from other places.[110] This implies that as early as the Early Roman Period the shield ornament may have demonstrated the status of its owner. This is the reason behind the presence of the aforementioned knobs, gilded edge mounts from Mušov, and also bronze or silver fittings of shield boss rims and heads of rivets which attached shield bosses and grips. Particularly ornamental silver or silvered shield grips which were decorated with filigree (Fig. 5.8:5–7) and sometimes even with inlay, are known from Scandinavia and northern Germany. What is more, one artefact of this kind was discovered in the Przeworsk Culture necropolis in Czersk near Warsaw, in Grave 93.[111] This is a unique find in this cultural unit.

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[96] Jahn 1916.
[97] Ilkjær 2001, 356–58 fig. 319.
[98] Kontny 2002a, table 2; cf. Adler 1993, 48–53.
[99] Kontny 2008b, n. 3.
[100] Andrzejowski 2000, 31.
[101] Kontny 2008b, 190–91, with further reading.
[102] Kontny 2008b, 187–91, with further reading.
[103] This shield was oval-shaped, 120 cm long and about 70 cm wide; Sternberger 1933, 18 fig. 11; Rasch 1991a, 67; Zieling 1989, 355.
[104] What survived in this case were edge fittings. Their total length was 260 cm — 'Statens Historiska Museum', 261–62 figs 28–33; Jahn 1916, 198, 205. If they, in fact, made up the circumference of a circle, as supposed by Zieling 1989, 934 n. 721, it should be assumed that the shield diameter was at least 80 cm.
[105] In the grave pit there were in situ finds of long arcuate parts of edge fittings of the upper and lower part of the shield. On this basis it was proposed that the shield had been round and its diameter was very large, that is 1.25 m — Mikkelsen 1990, 148–57 fig. 7.
[106] Among other things, fittings of three shields, i.e. gutter-like bronze edge mounts covered with silver and gilded sheet were found there. Although these survived in fragments, it was assumed that they had been part of oval shields whose size was 75 × 50 cm — Droberjar and Peška 2002, 118–24 pl. 5. This assumption, however, provokes some doubts. In spite of reservations resulting from the presence of finds that are typical of the end of the Early Roman Period and of the beginning of the Younger Roman Period, the assemblage is dated to the beginning of the Younger Roman Period, that is Phase B2/C1 — Peška and Tejral 2002, 501–13.
[107] Andrzejowski 2000, 23–47. Solely one find is known from a settlement, see Kontny and Rudnicki 2009, 35–38 figs 3–4. Cf. also Chapter 2 in this book.
[108] In the case of a miniature from an unknown grave in Siemianice the arrangement of fastening points is less orderly and encompasses the entire board. Thus, it resembles that on the shield from Vædebro.

Shield miniatures confirm that in the Early Roman Period there was a dominance of oblong shields. Their shapes were rectangular with slightly convex sides, or hexagonal. The image that emerges from the analysis of archaeological sources is only partly confirmed by iconography. Depictions of the Germanic warriors in Roman art display numerous round shields. In the reliefs of the Column of Marcus Aurelius there are many depictions of circular shields, while the share of hexagonal ones is low.[112] The latter fulfilled an attribute function in Roman art in the first century BC–second century AD.[113] It must be remembered, however, that iconography is only an indirect source for the analysis of Germanic weaponry, as ancient artists in all probability relied on a popular image of the Barbarians that was not necessarily true. What is more, the form and size of depicted weapons were to a significant degree dictated by compositional concerns, not faithfulness to original artefacts. In these circumstances, discrepancies between knowledge obtained from archaeological sources and that provided by Roman iconography must be decided upon in favour of the former.

In the Younger and Late Roman Periods, a fundamental change took place in Scandinavia. Large round shields (about 1 m in diameter, sometimes even 125 cm) became widespread. They were composed of several planks (Fig. 5.9). Such shields usually had bosses with ovoid surfaces. These were perfect for parrying strikes which would slide off the curves but were less useful in offensive combat. These bosses were rarely provided with spikes for delivering strikes, although such cases are also known.[114] Shields of this kind are well known first of all from the bog sites, but also the inhumation graves. In some instances, thinly tanned fragments of leather or intestines were preserved, which were used for covering the shield board.[115] Skin or intestines were stretched on the shield edge with a set of gutter-shaped trimming fittings.[116] It seems that this method was quite widespread. Such reinforcements of shields strengthened them significantly: as a result, even a strike which damaged the wooden structure was not able to split the fibres throughout their entire length. A considerable increase in shield durability as a result of the use of leather facings was demonstrated by experiments with replicas of shields from Illerup.[117] Scandinavian shields were also reinforced and repaired with fittings of various kinds (long metal sheets with a wavy course of their longer edges, smaller rhombic overlays) or with nails whose ends were both sharp. The latter were hammered in such a way that neighbouring planks were better connected.

Traces of paint on wooden surfaces survived sporadically. Shields were usually painted red (burnt sienna) or grey blue (Egyptian blue). Regrettably, ornaments are preserved only in fragments, and cases where is it possible to reconstruct the original motif are exceptional. The princely grave in Gommern in central Germany, dated to about 230–260,[118] contained a painted round shield that was covered with leather (Fig. 5.10:4). In this case, both colours were used, and on one of the surfaces it is possible to notice an angular pattern forming a star motif. This red star pattern against a blue background was placed in the

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[109] Zaseckaâ 1993, 51–73 pls 21–46; Maculevič 1950, 1–6.

[110] von Carnap-Bornheim and Ilkjær 1996, 279–98 pls 54, 117, 138, 234.

[111] Czarnecka 2014, 106, 108 figs 4:2; 5; see also Miśta-Jakubowska and others 2019.

[112] Schymalla 1987, 45 pl. I.

[113] What is meant is a personification of Germania (depicted with a hexagonal shield), that was widespread, among other places, on Roman coins — Hamberg 1936; cf. Andrzejowski 2000, 29–30.

[114] This allowed retaining the old-fashioned offensive combat style with the hemispherical umbo that was based on Roman patterns. This solution, however, did not become very popular (cf. Ilkjær 2001, figs 287, 291) and did not prove reliable in a longer chronological perspective.

[115] Warming and others 2016.

[116] Kontny 2008b, 192–93.

[117] Ilkjær 2001, 361–63.

[118] Becker 2010c.

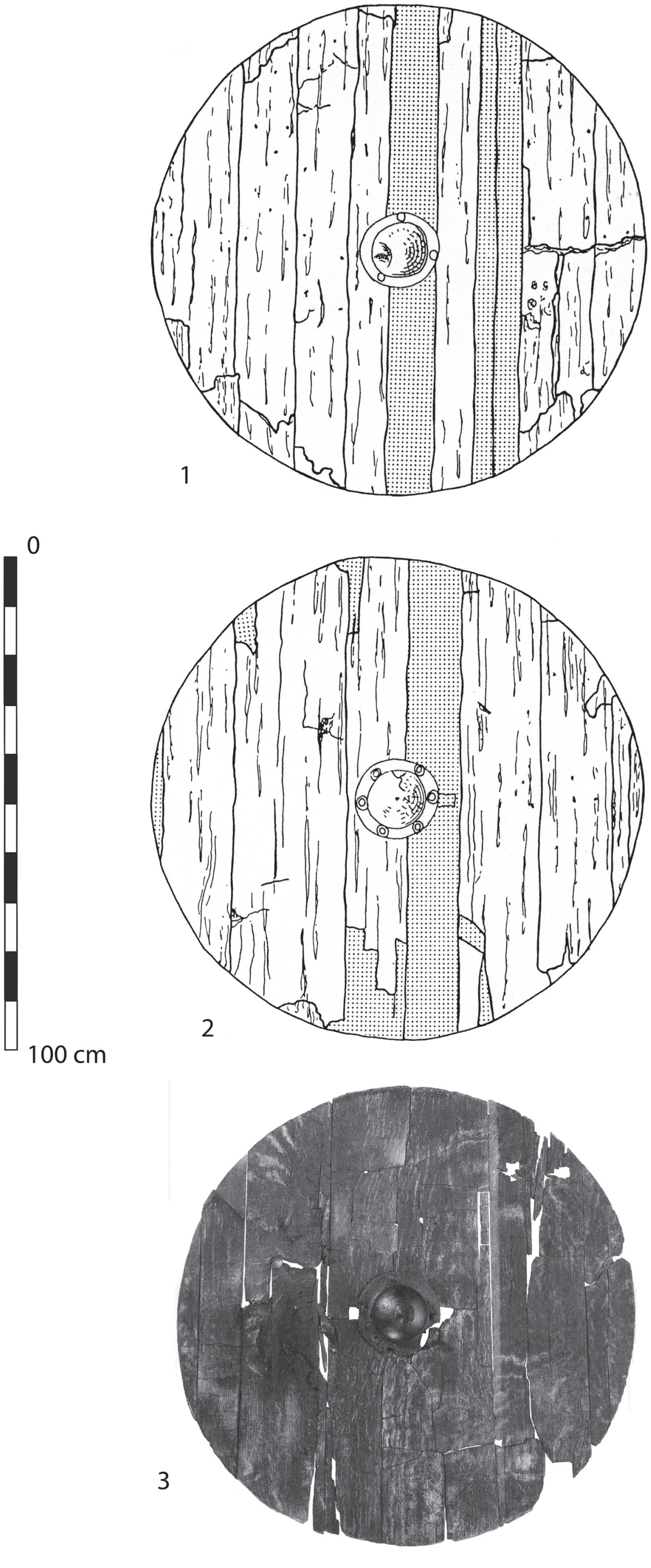

Figure 5.9. Examples of defensive shields from the territory of Scandinavia. 1–2 — Thorsberg; 3 — Shield SATF from Illerup (1–2 — after Raddatz 1987, fig. 21:1, 2; 3 — after J. Ilkjær 2001, fig. 199).

central part of the shield.[119] A miniature of a round shield with such a motif was part of a necklace from the first hoard from Szilágysomlyó (Şimleul Silvaniei) in Transylvania, dated to the mid-fifth century AD[120] (Fig. 5.10:1). It can also be found on shields that are depicted on a shorter golden horn from Gallehus in southern Jutland (Fig. 5.10:2–3). These horns are dated to *c.* 400 or slightly later.[121] The solar motif is nothing new in the Barbarian world — it was the most common pattern that was placed on shafted weapon heads.[122] Yet another ornamental motif was reconstructed on the basis of a discovery from the bog site at Nydam in Schleswig. Round shields with diameters of 80–90 cm and surviving traces of paint were found along the Nydam C pine boat.[123] On one of these shields there was a concentric pattern of intertwined lines that were painted red and contrasted with the grey background (Fig. 5.10:5).[124]

This kind of construction is a manifestation of a breakthrough in combat tactics. The introduction of new defensive shields can be seen as another piece of evidence demonstrating the existence of organized military structures in Scandinavia in the Younger and Late Roman Periods. On the basis of finds from ritual bog sites, it is possible to notice a clear hierarchy in Scandinavian quasi-armies. This hierarchy was manifested in different sets of weapons and their different qualities.[125] Attention is drawn to the standardization of weaponry, which was probably the property of military leaders,[126] distributed to warriors for the time of military expeditions.[127] Furthermore, the shield forms and the length (more than 3 m) of spears — which were not very useful in individual encounters but very effective when fighting in formation — seem to demonstrate the organized nature of Germanic troops. Large round shields protected a considerable part of the warrior's body and perhaps also his neighbour in the line. As their offensive qualities were limited, they could have been reasonably used first of all in massed ranks. A compact line of hierarchized troops who were probably also centrally commanded (by someone who was responsible for organizing the structure of such a quasi-army) is a formation in which large shields could have been used best. Such a battle array must have been a completely new phenomenon in the Germanic ways of combat.

This was very different from the situation in the Early Roman Period. Shields of that time were used for offensive purposes. This is demonstrated by, among other things, their elongated, portable shapes, which were convenient for active parrying of strikes, protecting against an attack, and for striking one's opponent. The shape of shield bosses was also of great significance (cf. Figs 2.7–9). Umbones from the Early Roman Period and the beginning of the Younger Roman Period are artefacts whose forms were still developing. This consisted of improving the spike which was used for striking. This aim was initially achieved by the conical ends of upper parts (Type Jahn 5), then by incipient spikes which were formed in this place (Type Jahn 6), and eventually by sharp spikes with penetrative points (Type Jahn 7b). The latter could have unquestionably inflicted terrible wounds[128] but may not have been very durable. Narrow points were easily deformed in contact with the object of attack.[129] In these circumstances, blunt apexes were introduced (Type Jahn 7a). These were also able to inflict severe wounds but were much more resilient. It is perhaps due to their durability that such fittings were long in use in the equipment of Barbarian warriors. It was first in Subphase C1b or possibly at the end of C1a that such shapes were abandoned. Hemispherical shield bosses with circular bases came into use. These were modelled on Roman solutions which were applied in auxiliary detachments.

The introduction of this new shield boss shape is explained by an adaptation of the Roman pattern (sometimes original Roman items may have been used). However, this was rather limited to the shield boss itself and not to the shape of the shield. In Roman infantry detachments, *scutum* shields were dominant. These were semi-cylindrical forms which protected almost the entire body of the soldier, including his sides, and could have been used for deflecting strikes.[130] Shields of this kind were used as early as the Late Republican Period.[131] In the times of Augustus, the central rib was replaced with a hemispherical metal shield boss that was attached to a convex base, rectangular in plan. The shape of the entire shield changed from oval to rectangular. Such items were reinforced with leather and signs of pertinence to a given detachment were painted on them. Their edges were provided with gutter-shaped fittings. *Scutum* shields were heavy (they could be composed of a few layers of plywood — Fig. 5.11:1a), and were therefore used for fighting in a close array and performed perfectly when applied together with the short sword (*gladius*) that was primarily used for thrusting. *Scuta* were also applied to form the famous *testudo*, which was principally used during sieges. The *testudo* was formed by means of protecting the detachments from the sides and from above, in order to defend the formation against missiles.[132] The offensive use of such a defensive armament was limited to pushing the adversary away, or possibly bludgeoning a prostrated enemy with strikes delivered with the lower edge.

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[119] Becker 2010a; Sieblist 2010; Naumann and others 2001, 195–96; Wunderlich 2001, 177–81.

[120] Capelle 1999, 59 fig. 3; Freiberger and Gschwantler 1999, 101 figs 12–13; for the summary of ideas concerning hoard's chronology see Kiss 2021, 478–84, 494.

[121] Axboe and others 1998, 334 pl. 3.

[122] Its significance was discussed in Chapter 2.

[123] Petersen 2020, 166–95.

[124] Jørgensen and Petersen 2003, 268–69 fig. 10; Petersen 2020, figs 4.1, 4.16.

[125] von Carnap-Bornheim and Ilkjær 2006; Ilkjær 1997, 56–61.

[126] von Carnap-Bornheim 1992, 45–52; 2000, 40–61.

[127] Metallurgical examinations of shafted weapon heads from Deposit Illerup A demonstrated that these were serially made, perhaps on mass orders, Ilkjær and others 1994; Carnap-Bornheim and Ilkjær 1996, 384. Centralized war gear production is also proposed by T. Birch in his metallographic studies concerning, i.e., spearheads of Type Havor. Unlike the individuality of knives produced in an unspecialized manner, the spears reflect individuals sharing a military occupation, the same tools of war and an identity and purpose — see Birch 2013, 326–31.

[128] Kazimierz Godłowski mentions Tacitus's report from *The Life of Julius Agricola* (Tac., *Iulii Agricolae vita*, 36) which says that Germanic auxiliary cohorts fighting on the Roman side were striking with shield convexities, thrusting at the enemy's face during an attack in the Battle of Mons Graupius in Caledonia, see Godłowski 1992, 80. Umbones with sharp spikes are dated to this time.

[129] Kontny 2001a, 118–20 figs 2–3; see Chapter 2 in this book.

During the Crisis of the Third Century Roman military underwent changes. These included, e.g. an increase in the importance of cavalry, and as a result the significance of the *scutum* decreased. Such shields were in use up to the mid-third century, except in gladiator fights, where they prevailed longer. Apart from a great many iconographic depictions, Imperial Period *scuta* are testified to by a discovery from Tower 19 in Dura Europos upon the Euphrates (Fig. 5.11:1).[133] This fortress was a key element in the Roman defensive system in the East. In the period of the Late Empire, Roman infantry used oval shields made from vertically arranged planks that were covered with a layer of glue and cloth. Such shields were sometimes painted (even on both sides) and their edges were reinforced with tough raw hide. The hide's shrinkage additionally reinforced the entire structure. These shields were sometimes provided with rings for the fastening of thongs, which were used for transportation. They differed from their predecessors by being smaller and nearly flat[134] and were provided with two openings in the central part (one trapezoid, one semicircular). These were covered with shield bosses, circular in plan. Their forms are known not only from depictions but also from finds in Dura Europos in Syria (Fig. 5.11:2–3).[135] As can be seen in iconography, in the fourth century, next to oval shields (the Arch of Constantine, wall paintings in catacombs, tombstones, the Diptych[136] of Stilicho — Fig. 5.11:4), round shields were also in use (the Arch of Galerius, the Arch of Constantine, illuminations from the *Notitia dignitatum* — a document that details the administrative structure of the Western Roman Empire from the 420s and that of Byzantium from the 390s — Fig. 5.11:5). It is even assumed that round shields were adopted from the north Germanic world;[137] this hypothesis is supported by the fact that the late period of the Empire witnessed a strong Barbarization of the Roman army, with special reference to the Germanic impact. This must have influenced combat tactics and weaponry,[138] which favoured fighting in formation, manifested in the aforementioned specific weaponry (shields and spears that were more than 3 m long) and in the hierarchy that can be identified on the basis of finds from north European war booty offerings.[139] Roman cavalry shields did not undergo such a strong transformation. They were usually either oblong (thus protecting the horseman's thighs), oval, rectangular, or hexagonal — only in exceptional cases round shields were used — and augmented with circular shield bosses.[140]

Let us consider again whether hemispherical shield bosses taken from the repertoire of Roman weaponry also meant an adaptation of the shield's construction. There is nothing to support this assumption. Shield grips used by the Germanic warriors were without a doubt of local provenance and Roman *scuta* were not appropriate for military tactics that were in use in the central European *Barbaricum*. The defensive combat style was not yet adopted there in the mid-second century, unlike in Scandinavia. This seems to be testified to by the fact that fashionable hemispherical shield bosses very soon (as early as Subphase C1b) started to be provided with knobs. These were meant to render the

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[130] Nabbefeld 2008, 17–26; Travis and Travis 2014, 50–58.

[131] Cf. the aforementioned find from Qasr al-Harit, the depictions from the altar of Domitius Ahenobarbus, as well as images of shields on the monument of Lucius Aemilius Paullus in Delphi.

[132] Travis and Travis 2014, 117–22 figs 69–71.

[133] In the third century this shield was already anachronistic and this is probably why it was stored in the armoury as an antique and had no shield boss — James 1990, 232–33 pls 2.4.AK–M; Nabbefeld 2008, 19, 263–64, pl. 101; Bishop and Coulston 2006, 179 fig. 117:1, pl. 4:a; Travis and Travis 2008, 63–66.

[134] In fact, they were slightly bent in both the vertical and horizontal plan — Travis and Travis 2014, fig. 37.

[135] James 1990, 222–26, pls 2.4.W, 2.4.X, 2.4.AA, 2.4.AC; Bishop and Coulston 2006, 179 fig. 117:2, pl. 4:b–c; Nabbefeld 2008, 257–63 pls 97–100.

[136] A double plate made of ivory was presented to high Roman officials taking their posts.

[137] Bishop and Coulston 2006, 216–18 figs 130, 133, 138 pl. 6.

[138] This was related to, among other things, adopting heavy cavalry armament, lighter infantry equipment, abandonment of numerous parts of arduous drill and paying attention to soldiers' physique and strength, giving up the habit of erecting fortified camps for nights, etc. — Wilczyński 2001, 40–42.

[139] Cf. Chapter 1.

[140] Cf. Dixon and Southern 1992, 44–45.

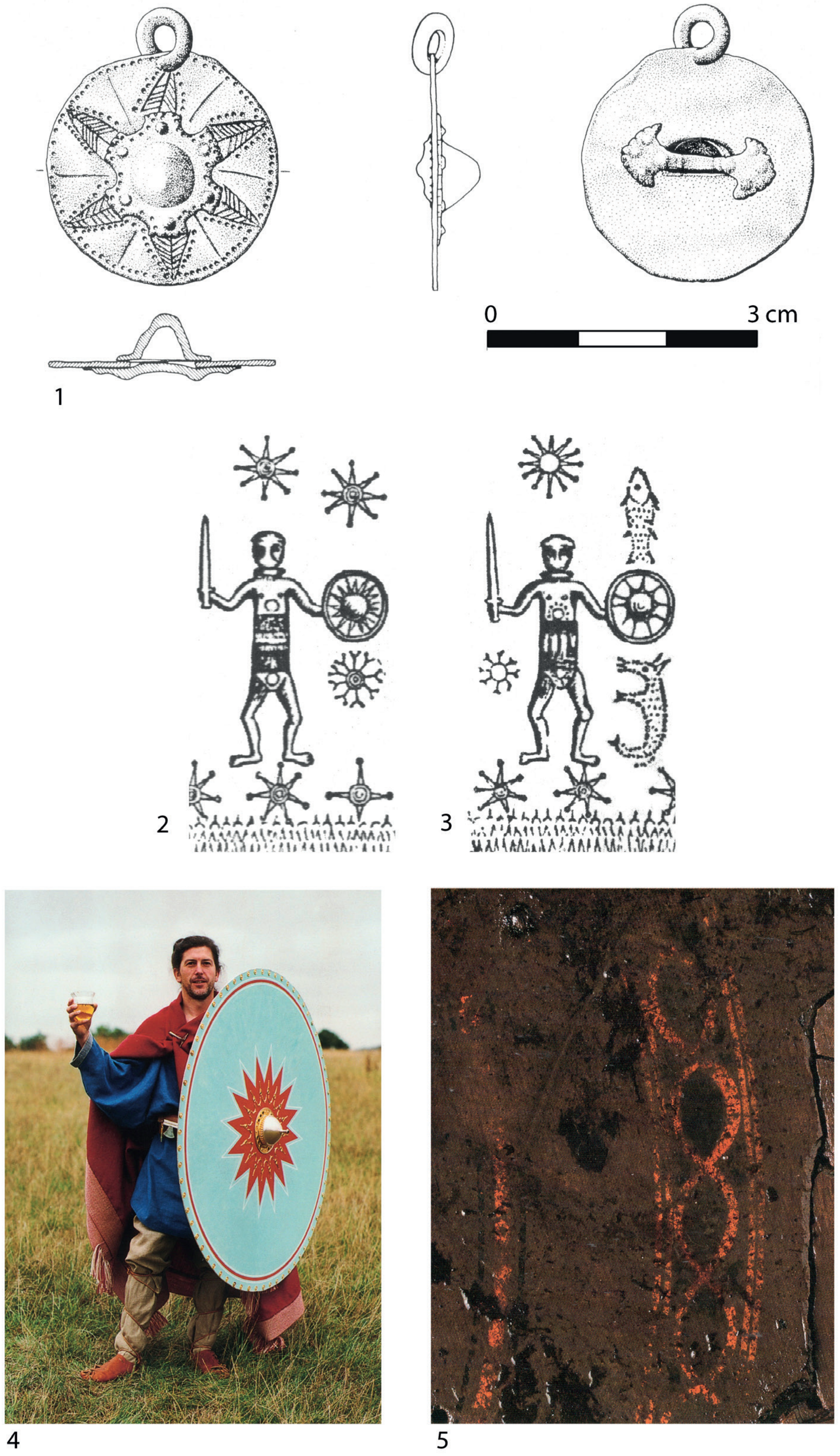

Figure 5.10. Ornaments of shields from the Roman Period and the Migration Period. 1 — pendant from a golden chain found in Hoard I in Szilágysomlyó; 2–3 — depictions from the shorter golden horn found in Gallehus; 4 — reconstructed attire of the Gommern prince worn by Olaf Kürbis; 5 — ornament of a shield from Nydam (1 — after Capelle 1999, fig. 3; 2–3 — after Jacobsen and Moltke 1941–1942, 12, 15; 4 — photo Andrea Hörentrup, courtesy of the State Office for Heritage Management and Archaeology Saxony-Anhalt — German Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt; 5 — after Jørgensen and Petersen 2003, fig. 10).

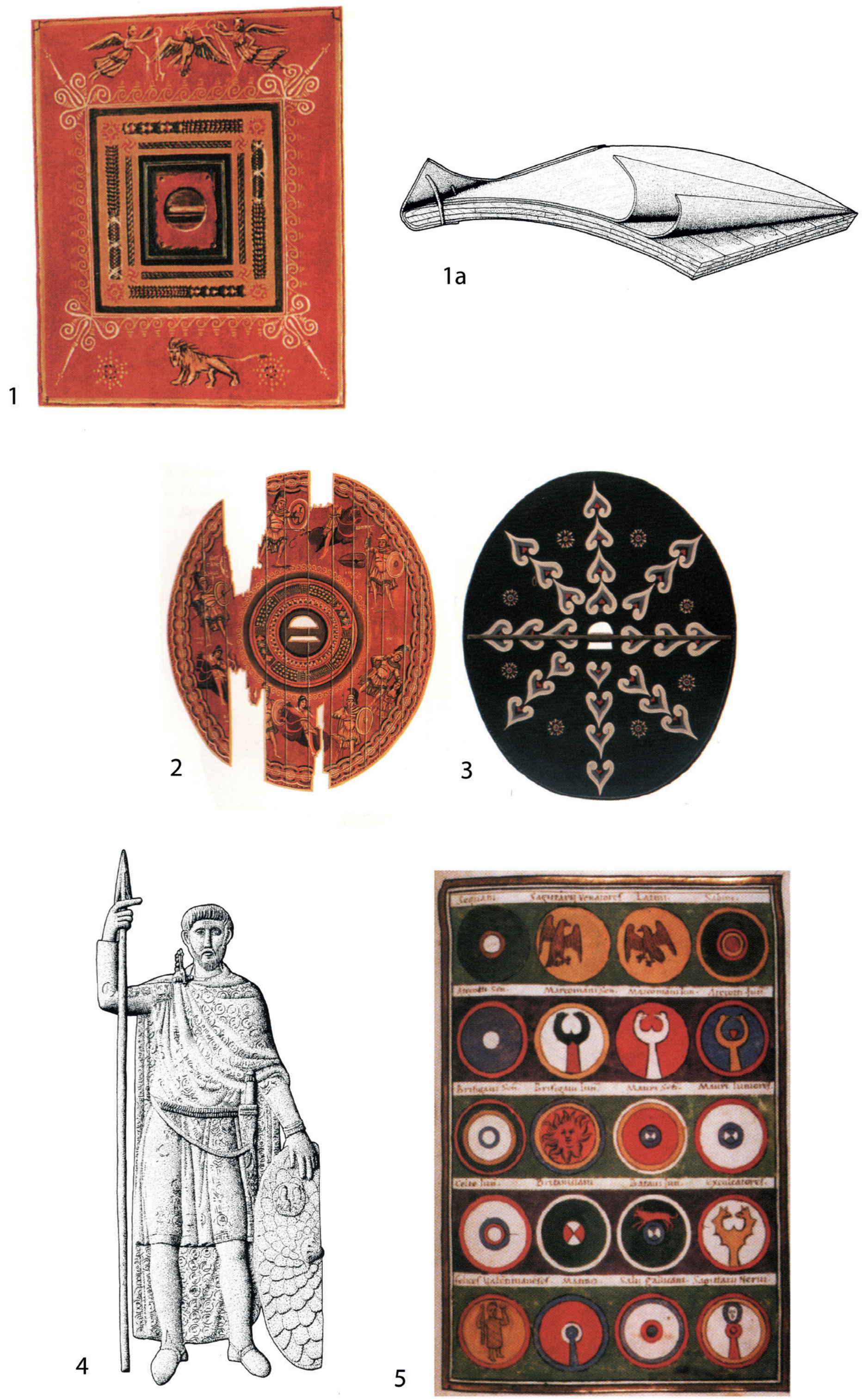

Figure 5.11. Roman shields from the Imperial Period. 1 — shield from Tower 19 in Dura Europos (1a — cross-section); 2 — reconstruction of the ornament of the front side of the oval shield from Dura Europos; 3 — reconstruction of the ornament of the back side of the board of the oval shield from Dura Europos; 4 — fragment of the Consular Diptych of Stilicho; 5 — depictions of shields in the *Notitia dignitatum* (after Bishop and Coulston 2006, figs 30:2, 130, pls 4, 6).

offensive use of shields possible (Fig. 2.9). A similar role in hemispherical Scandinavian shields was fulfilled by spikes attached on the cover (Fig. 4.28:2). What is more, occasional examples of Younger Roman Period gutter-shaped edge fittings from the territories of the Przeworsk and Luboszyce Cultures are either straight or angular. These demonstrate that the aforementioned 'innovations' either did not broadly reach central Europe, or only arrived there after a considerable delay.[141] It is also worth noting that apart from different shield forms, the development of weaponry in the Przeworsk Culture and in Scandinavia took diverging courses from Subphase C1b onward. On the other hand, shields that were adapted to fighting in the battle array were a phenomenon that was also known beyond Scandinavia, as demonstrated by some finds of shields or their depictions (Figs 5.10:1, 4).[142] The same is suggested by short shield grips, which are known in Scandinavia, but were also widespread in other regions of Barbarian Europe. Thus, changes spread in the Barbarian world at different paces.

After hemispherical shield bosses,[143] new models took over. These were similar forms, but clearly convex in their profiles and their cones became increasingly dome-shaped. Such shield bosses are classified as Type Zieling L.[144] Eventually, shield boss shapes became similar to a hat with a broad rim (Type Zieling K) which protected a considerable part of the board. These are especially characteristic of Phase C3. In the Early Migration Period there was a reappearance of a solution taken from the Mediterranean tradition, or specifically from East Roman or the middle Danube provinces, that is, dome-shaped shield bosses with profiled or fluted covers. The latter are known from, among other sources, the aforementioned Diptych of Stilicho. They occurred in simpler forms (fluted cones) or in more elaborate ones (faceted covers). They were especially numerous in the Carpathian Basin and in the south of Poland,[145] but also in the Pontic zone. Very soon, they may have found their way very deeply into the *Barbaricum*, thanks to Germanic warriors serving in the Roman army. Many 'hat-like' shield bosses and those of dome-like shapes with profiled cones were attached not on flat but high flanges,[146] which demonstrates that these were fixed on shield boards that were convex both in the vertical and in the horizontal plane. Thanks to this, shields were more durable, as sword strikes were falling not on the upper edge but to a greater degree on the board itself. Furthermore, such shields secured a better field of view.[147]

All ethnographic analogies and comparative sources from other periods, as well as sparse iconographic depictions of the Germanics in Roman art (Fig. 5.12) demonstrate that shields were held in the left hand (perhaps with an exception for left-handers). Shield grips were usually made of wood,[148] but were often reinforced with metal fittings, which were sometimes ornamented (archaeologists use the same term for them). In the Late Pre-Roman Period metal parts of shield grips were very rare in the *Barbaricum*, and first came to prominence in the Roman Period. The earliest ones from Phases A2–A3 of the Late Pre-Roman Period consisted of a bar which ended with rivet plates. These were either single or double (which was meant to additionally consolidate the shield) and the bar sometimes extended beyond them.[149] Metal shield grips became much more numerous in the Roman Period (cf. Figs 2.7–9). In Phase B1 there was a preponderance of grips with rivet plates that were profiled like a figure-of-eight (Type Jahn 6).[150] Afterwards (Subphase B2a), very similar grips became widespread, but their terminals were rectangular (Types Jahn 7–8). These two kinds of shield grips were sometimes very decorative. For instance, many were made of bronze and then covered with silver sheets and provided with decorative rivets. Such rivets had thimble-shaped heads (also ornamented with silver) and were provided with even more decorative tutulus-shaped washers (German *Gegennieten*) that could be seen on the outer side of the shield. Crests separating the rivet plates from the grip were provided with a decorative wire, or were even — as demonstrated by the find from Brostorp on Öland[151] — ornamented with filigree and inlaid with glass (Fig. 5.8:5–7). What is more, shields with such grips often had numerous edge fittings and their bosses (often attached with rivets with decorative heads) were embellished with silver or copper trough-shaped mounts on the flanges' rims. Thus, such items were both functional and ornamental, which certainly represented the high status of the warrior who owned them. Shields of this kind were especially popular in Scandinavia, and are also found in northern Germany. They are, however, very rare in the Przeworsk Culture.

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[141] Straight parts of shield edge fittings of a total length of 290 cm were found in the burial ground of the Luboszyce Culture in Grzmiąca, Słubice District — Marcinkian 1978, 97–98 fig. 14; bearing in mind the presence of the Ilkjær 6c type shield boss that was clearly of Scandinavian provenance, the assemblage should be dated to Subphase C1b — cf. Ilkjær 1990, fig. 19. Furthermore, a fragment of a bronze fitting that was bent at an obtuse angle is known from the necropolis in Lachmirowice, Inowrocław District (Przeworsk Culture). This was perhaps part of a hexagonal shield — Zielonka 1953, 376 fig. 27. The find is to be dated to Subphase C1b, or possibly to the late part of C1a (the assemblage contained, i.e. the spur of Variety Ginalski G1 and shards of *terra sigillata* from the workshop of Helenius in Westerndorf — Tyszler 1999, 58). The chronology of Grave 722 in the cemetery in Opatów, Kłobuck District is analogous. This grave yielded fragments of straight iron gutter-shaped fittings that were accompanied by, among other things, a sword and spurs — Madyda-Legutko and others 2011, 179–80 pl. CCLXV:7. Similar fittings, albeit less numerous and thus more difficult to interpret unequivocally, were also found in the same necropolis in Grave 714 from Subphase C1a (Madyda-Legutko and others 2011, 178 pl. CCLX:5) and Grave 1277 from Phase C2 (Madyda-Legutko and others 2011, 257 pl. CCCXCVI:2).

[142] These are the aforementioned shield from the 'princely' grave from Subphase C1b discovered in Gommern in central Germany and the pendant from the late stage of Phase D from the first hoard discovered in Szilágysomlyó (Şimleul Silvaniei). A circular (or oval) shield was also deduced on the basis of edge fittings from Grave 11 in Großneuhausen, Lkr. Sömmerda, which is dated to Phase C1 (two bronze fibulae of Type Almgren 161/62 — Mildenberger 1970, 51, 109 pl. 15:11a–f). However, this publication offers no grounds to verify such a reconstruction. It solely depicts one fitting fragment, although their actual number was significantly higher.

[143] Cf. Godłowski 1992, figs 1–4; 1994a, fig. 1.

[144] Zieling 1989.

[145] Istvánovits and Kulcsár 1992, fig. 23; Kazanskij 2019.

[146] Cf. Istvánovits and Kulcsár 1992, fig. 15:1, pls II–III.

[147] Cf. Ratsdorf 2009, 343–48 figs 6, 8, 9.

[148] Ilkjær 2001, 314–17.

[149] Cf. Bochnak 2005, pl. XL.

[150] Jahn 1916.

Yet in the Early Roman Period shield grips took the form of a handle that was domed in a gutter-like manner (it was placed on a wooden grip), with flat rivet plates (Type Jahn 9). Initially, such plates were trapezoid, rectangular, or fan-shaped. In all probability they also had their leather prototypes, as cutting such a shape in leather resulted in more durable fastening than in the case of a narrow terminal of the grip. Exactly this kind of a shield grip is depicted in the hand of a dying German on the Column of Marcus Aurelius in Scene LXXVII (Fig. 5.12:3).[152] The warrior's forearm is under the grip and there is no doubt that the grip was made of leather, due to the manner of its deformation. It is also possible to observe a full chronological convergence between the time of the Marcomannic Wars, the later construction of the column, and the period of metal shield grips with fan-shaped rivet plates' popularity. These were in use from Subphase B2b to C1a, while in Subphase C1b there were mainly artefacts with long trapezoid or rectangular terminals. This supports an assumption that leather grips were imitated with the use of metals. In later phases, the surface of rivet plates was smaller and smaller, and the length of shield grips decreased.[153] This can be explained by the introduction of shields with figure-of-eight openings for grips (Fig. 5.13:2), or the ones with two openings (one trapezoid and one semicircular) which were similar to Roman patterns (cf. Fig. 5.11:2–3).

Such openings were perfectly recorded on shields from Scandinavian bog sites of the Younger and Late Roman Periods. Grips were attached in a horizontal manner, in the place where the opening narrowed or at the contact point between both openings. In contrast to Early Roman Period patterns, such shield grips were not fixed with the same rivets that fastened bosses. This was due to the fact that the place where the grip was attached was entirely covered by the shield boss. Thus, it was very difficult for an opponent to separate the handle from the shield planks, as the sword strike did not reach the rivet end that was placed below the umbo. This explains why a pair of shield grips joined with rivets was found in Grave 13 in a Przeworsk Culture burial ground in Piaski in central Poland (Fig. 5.13:1).[154] In all probability, a double reinforcement was applied here, and the grip was not connected to the shield boss.

It must be noted that not all umbones were necessarily made of metal. A few Roman Period organic artefacts are known from the bog sites in Vimose in Funen and in Thorsberg in Schleswig. At the first site, at least five wooden bosses were found, out of which two survived in a good condition: one with an embryonic blunt apex and the other with a broad, short, so-called pseudo-spike.[155] The short lengths of these wooden spikes are easy to understand, as longer ones would break too easily during offensive use. The morphological traits of these shield bosses (a high number of rivet openings), and the popularity of such forms (but made of iron) first of all in the Balt milieu, allows us to assume that these bosses were not of local origin. Instead, they probably belonged to invading forces among whom Balt mercenaries were present.[156]

This does not, however, mean that wooden shield bosses were not used beyond the West Balt milieu. In the Przeworsk Culture the share of graves with shield fittings is more than 50 per cent, and in the Younger and Late Roman Period it reaches as high as 70 per cent.[157] However, it must be borne in mind that every warrior used a shield, as coherently demonstrated by iconographic and written sources as well as the analysis of weaponry from war booty offerings. Therefore, there is still some room for shields that were entirely organic and did not withstand the fire of the funeral pyre. What is more, a hemispherical shield boss made of wicker was found at Thorsberg (Fig. 5.13:3).[158] A

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[151] Rasch 1991a, 65–67, 105–13.

[152] Caprino and others 1955, pl. M.

[153] Cf. Godłowski 1992, figs 1–4; 1994a, fig. 1.

[154] Skowron 1997, 15 pl. I:1.

[155] Engelhardt 1866, 50; 1869, pl. 5:4, 9.

[156] Kontny 2019a, 102.

[157] Kontny 2008a, graph 12.

[158] Engelhardt 1863, pl. 8:15; Raddatz 1987, pl. 82:1; Matešić 2015, 161, 416 pl. 74:M483.

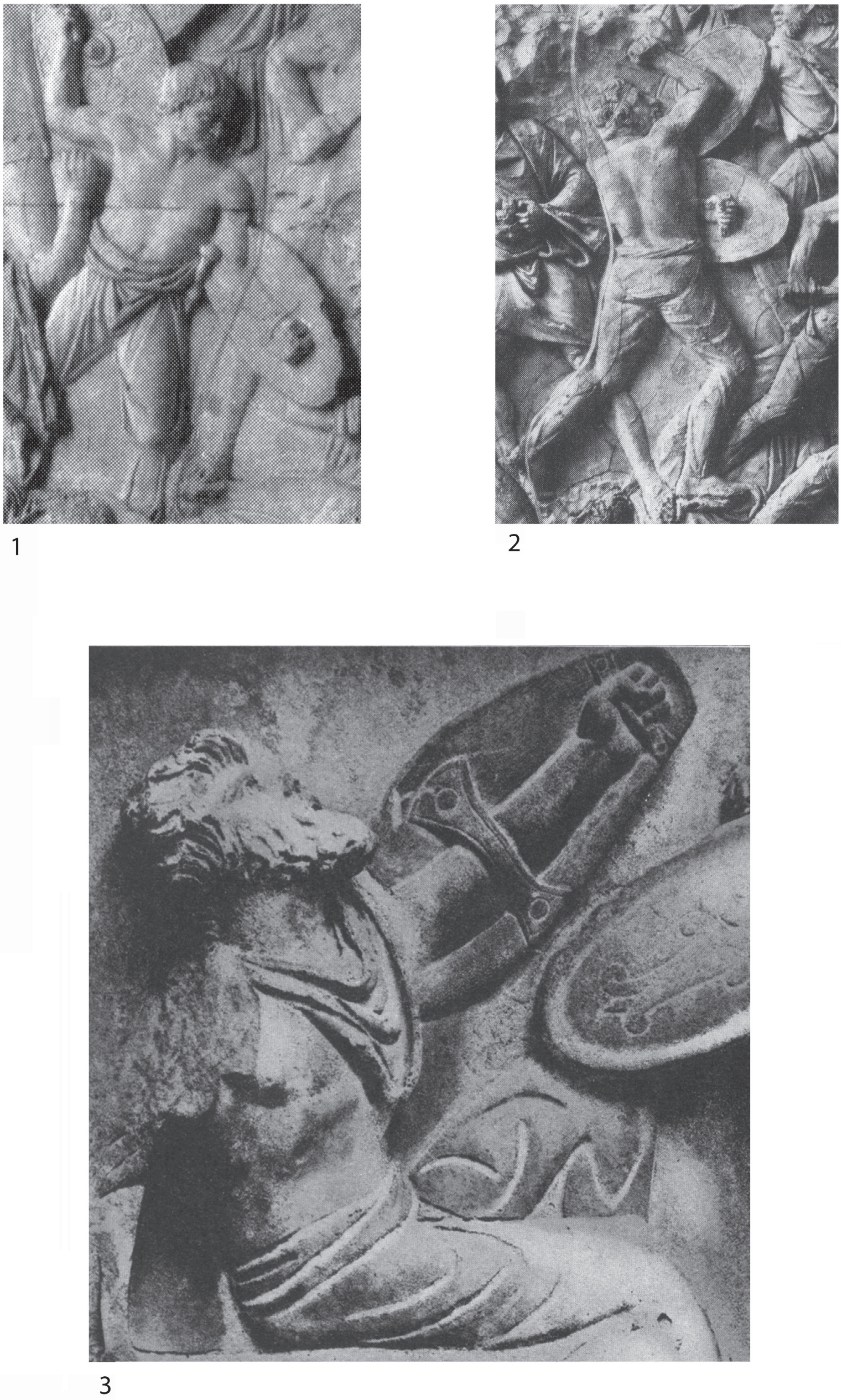

Figure 5.12. Depictions of shields provided with two shield grips and probably with no shield bosses. 1 — Column of Trajan, Scene 24; 2 — Column of Trajan, Scene 72; 3 — Column of Marcus Aurelius, Scene LXXVII (1–2 — after Koeppel 1991, figs 17:44, 50:20; 3 — after Caprino and others 1955, pl. M).

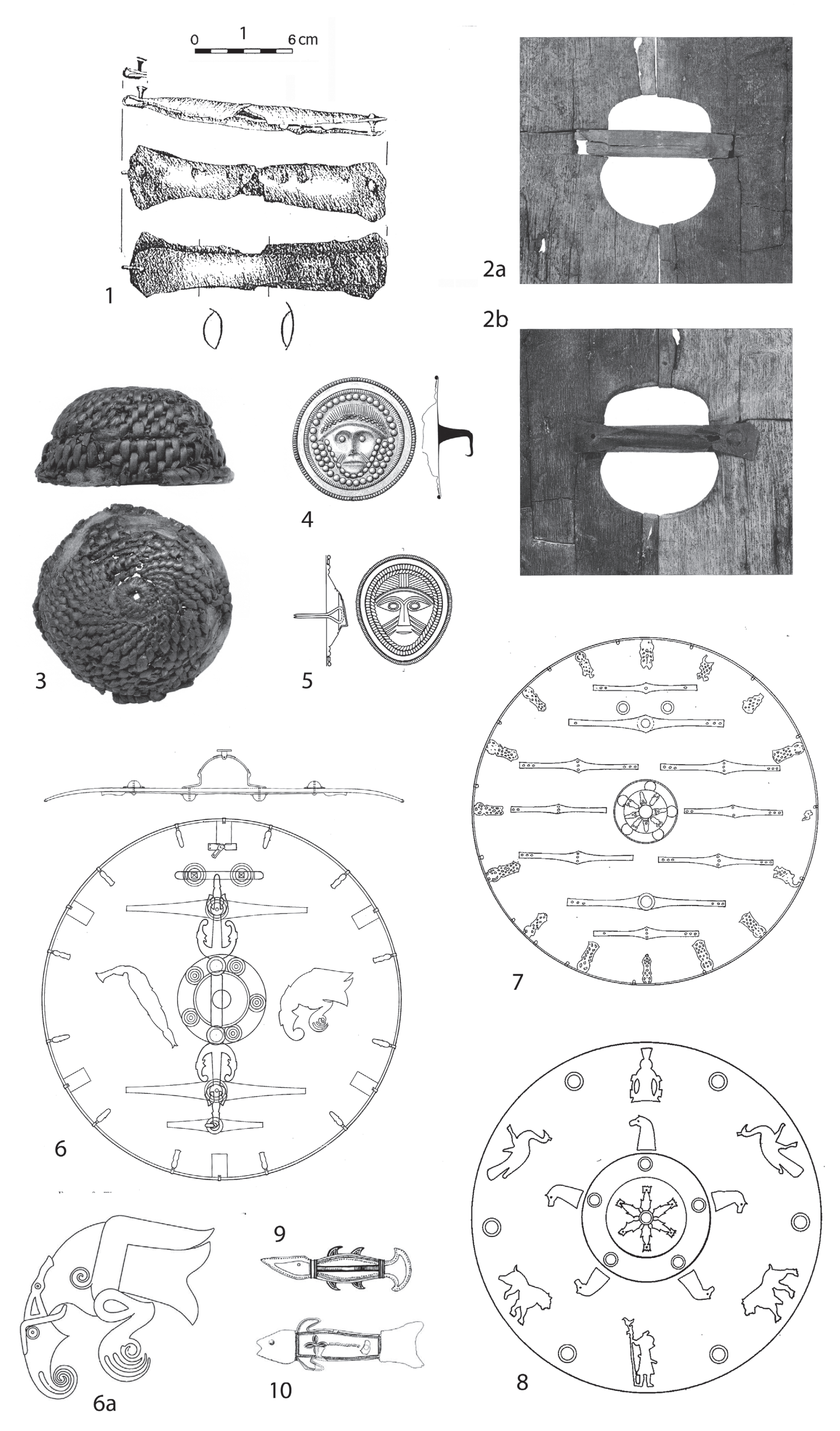

Figure 5.13. Shield parts from the Roman Period and the Migration Period and their reconstructions. 1 — shield grips from Grave 13 in Piaski; 2 — fastening of the grip on Shield SAUP from Illerup, 3 — wicker shield boss (?) from Thorsberg; 4–5 — ornaments of shields from Illerup with the motif of a human head; 6 — shield from Barrow 1 in Sutton Hoo (6a — ornitomorphic ornament); 7 — shield from Valsgärde, Grave 1; 8 — shield from Lucca; 9 — ornament of a shield from Sheffield's Hill; 10 — ornament of a shield from Kenninghall (1 — after Skowron 1997, pl. I:1; 2, 5 — after Ilkjær 2001, figs 9, 10, 4–5, fig. on p. 330:SAUE, WXF; 3 — after Matešić 2015, pl. 74:M483; 4 — after von Carnap-Bornheim and Ilkjær 1996, fig. 101:ICD; 6–8 — after Bruce-Mitford 1978, figs 8, 28, 29, 48:a; 9–10 — after Dickinson 2005, figs 10:a, c).

wooden hemispherical artefact with a distinct rim is also known.[159] The author of the discovery believed that these artefacts had been used as internal padding of a shield boss[160] which truly might have been useful, as the interior of a shield boss could have easily scraped the skin off the knuckles, as observed in the experiments with Bronze Age leather shields.[161] This opinion, however, is very difficult to accept. The purpose of such a solution is hard to imagine, as the metal cover was already sufficiently resistant. What is more, the flange of the wooden artefact (which regrettably did not survive) was believed to be very pronounced, which disproves the idea proposed by Conrad Engelhardt. The plaited artefact's poor state of preservation does not allow for determination of the find's function. Nonetheless, one may notice that wicker cannot be treated as a delicate material to protect the hand. Its combat use is not very probable, due to the lack of traces of attachment which can also be seen in original images.

Shields provided with openings covered by shield bosses were not the only solution known in the Germanic world. It is also possible to suppose the existence of artefacts with a simpler construction. Such shields were oblong and equipped with two grips. The longer one embraced the forearm and the shorter was placed near the shield's edge, and was held with the hand or fingers. A shield of this kind is used by the aforementioned Germanic warrior in Scene LXXVII on the Column of Marcus Aurelius (Fig. 5.12:3). Similar depictions can be also found on Trajan's Column (Fig. 5.12:1–2). In this case, analogical artefacts can be seen in the hands of the Germanic men fighting in Roman service, but dressed and armed according to Barbarian customs (Scenes 24, 38, and 72).[162] What is more, such shields are also used by the Barbarian members of *auxilia* who are dressed in the Roman way (Scene 115)[163] or by the Dacians (Scene 93).[164] Shields of this kind were not exposed to damage as a result of the upper edge being split by a sword strike, as their lower edges were somewhat exposed to strikes, but to a lesser degree than in the case of shields with bosses. On the other hand, these shields chiefly protected the forearm, while shields with umbones protected a much larger surface if the hand was moved forward. The simpler construction with no shield boss was to a great degree used for the active parrying of strikes, for striking in order to knock the weapon out of the adversary's hand or to move it away out of lethal range, for striking at the adversary's face with the edge, etc. However, it was not possible at all to deliver more devastating strikes aimed at inflicting stab wounds.

Such shields were cheaper to make but, in the long run, they were no match for shields fitted with metal. An increasing occurrence of shield fittings in graves in the territory of Barbarian Europe seems to demonstrate that shields with metal bosses gradually forced out shields that were entirely organic.[165] On the other hand, shields with no bosses could be successfully used in mounted combat, as they perfectly protected the horseman's side. What is more, they enable the rider to freely control the horse with the left hand. Releasing the shorter grip in order to better hold the reins did not mean that the shield was lost, as it still firmly rested on the forearm. Similar shields were also reported in the Empire. Two oval, 'boss-less' artefacts (with single grips) made of wood were found in Dura Europos. These may have been used by cavalry or camelry.[166] The same site also yielded a further three wood and leather artefacts (and a fragment of another) made of vertical wooden sticks woven through patterns of slits into a large sheet of rawhide which, on drying, contracted and held them tightly in place. Their dimensions varied (1.55 × 0.8 m and 1 × 0.5 m) and these shields may have been used in order to protect archers. On the other hand, it is not certain whether they were used by the Romans, or by their enemies.[167] In this place it is possible to refer to a description of the Cimbri (who are considered Germanic, although some researchers believe that they were a Celtic tribe;[168] their fatherland was the Cimbrian Peninsula, that is Jutland). They crossed the Alps in order to attack the Romans who were trying to resist them. These events took place at the end of the second century BC near the Natisone River (Latin Natiso) on the Adriatic Sea. Plutarch stated that Cimbrian warriors crossed the mountains naked, but also slid down the mountain tops on their shields, using them as sledges.[169] Naturally, this author intended to underline the savagery of the Barbarians, but it seems that this episode could be true. If this was in fact the case, such an exploit would only be possible only on a shield with no boss or the Celtic type, with a spine.

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[159] Matešić 2015, 161, 415–16.

[160] Engelhardt 1866, 50.

[161] Molloy 2020, 29.

[162] Koeppel 1991, 153, 155, 165–67, 190–91 figs 17:44, 27:5, 50:20.

[163] Koeppel 1992, 92–93 fig. 29:59.

[164] Koeppel 1992, fig. 12:17.

[165] Kontny 2008a, 126–27.

[166] James 1990, 76, 235–36 pl. 2.4.AO; 2004, 163, 168; Travis and Travis 2014, 66.

[167] James 1990, 236–38, pls 2.4.AP, 2.4.AQ; 2004, 162–63; Travis and Travis 2014, 66–67 fig. 39.

[168] This is due to the Celtic names of kings participating in the expedition of the Cimbri. However, this phenomenon can be easily explained by the fact that various other peoples, including Celtic tribes, may have joined the wandering Cimbri, see Kolendo and Płóciennik 2015, 43–49.

[169] Plutarch, *Caius Marius*, XXIII. 3: 'more by way of displaying their strength and daring than because it was necessary at all, they endured the snow-storms without any clothing, made their way through ice and deep snow to the summits, and from there, putting their broad shields under them and then letting themselves go, slid down the smooth and deeply fissured cliffs'.

It has already been mentioned that shield ornaments from the Early Roman Period may have indicated their owners' elite position in their social hierarchy. This is manifested especially in Scandinavian shields from the Younger and Late Roman Period. Thanks to a detailed analysis of finds from the Illerup bog site, it was possible to demonstrate that shields with silver and gilded bosses, grips, and board fittings belonged to military leaders or chieftains (Fig. 1.2:1). The group in the middle of the hierarchy used shields with bronze bosses and grips, and in the case of common warriors, these shield parts were made of iron. Such a hierarchy can also be identified on the basis of finds from other offering sites and graves.[170]

The most precious shields from Illerup and Vimose had boards with a motif of a human head (Fig. 5.13:4–5).[171] In the Mediterranean world such depictions had an apotropaic (protective) significance: see, for example, heads of Medusa on Roman phalerae (circular military decorations)[172] or on ornamental shield bosses.[173] A similar meaning, completed with the symbolism of a severed head taken from the Celtic and Germanic world,[174] may have been the case with ornaments of Germanic shields. Similar depictions are also known from baldrics that were used for suspension of sword scabbards,[175] and from phalerae which ornamented the mail armour from Thorsberg in Schleswig.[176]

Shield ornaments made from metal sheets nailed into planks were in use in the Migration Period, especially in Britain (sixth century) and in Scandinavia. Such ornaments were cut into shapes of animals: fish, birds of prey, dragon-like beasts, or quadrupeds of unidentified species (Fig. 5.13:6, 9–10).[177] At the same time, the Longobards in Italy used shield boss and shield board fittings in the shape of birds of prey,[178] horses, or eagles (Fig. 5.13:8).[179] These depictions fit within animal stylistics (Styles I and II according to Bernard Salin)[180] that were very popular in the Migration Period, especially amongst warriors. It is assumed that placing such images on shields was intended to provide their owners with security, and the very idea of using such ornaments was partially a result of Late Roman inspiration. This inspiration was perfectly rendered in animal decorations painted on the planks of shields that can be seen in the *Notitia dignitatum*.[181]

Large round shields were used in these periods. Such shields were the successors of Scandinavian forms from the Younger and Late Roman Period, and of Roman types from the Late Imperial Period. Shields of this kind are confirmed in Scandinavia[182] and in Anglo-Saxon Britain.[183] In the latter case, they strongly vary with regard to their morphology. Perhaps there was a preponderance of flat shields, but slightly convex ones are also numerous. The latter can be identified on the basis of long grips which were somewhat bent, which is why it can be assumed that the shield board was also bent (Fig. 5.13:6). On the other hand, a similar situation was also the case on the continent: in Scandinavia (Fig. 5.13:7) and in Alamannic burial grounds.[184] First of all, however, the Anglo-Saxon shields are smaller than the continental ones, sometimes significantly (0.34–0.92 m in diameter). In general terms, three sizes can be distinguished: small (0.34–0.42 m) — resembling medieval and Renaissance bucklers,[185] medium (0.45–0.66), and large (0.7–0.92).[186]

The presence of large shields allows us to assume that battle formation was still in use. On the other hand, there was a return to uncoordinated combat practices. Some shield grips became significantly larger, especially those used in large shields (Fig. 5.13:6).[187] This strengthened the durability of the entire structure. West European shield bosses were initially (in the Early Migration Period, after they had replaced umbones with fluted cones) conical, with apexes of varying shapes. Spikes were either sharp (so-called Type Horgos — Fig. 5.14:1), blunt (Type Liebenau — Fig. 5.14:2), embryonic (Type Vermand — Fig. 5.14:3), or short and blunt.[188] On the

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[170] von Carnap-Bornheim and Ilkjær 1996, 285–98, 483–85.

[171] von Carnap-Bornheim and Ilkjær 1996, 284, 433–40 figs 201, 257 pls 63, 121, 135, 145, 243.

[172] Maxfield 1981, 92–94; Nicolay 2008, 43; Fischer 2012, 237 figs 364, 365.

[173] Nabbefeld 2008, 47, 48 pl. 70:539.

[174] Cf. Chapter 1.

[175] Kirkebakkegård in Zealand — von Carnap-Bornheim and Ilkjær 1996, fig. 214.

[176] Engelhardt 1863, pls 6:1, 7:7; cf. Werner 1941.

[177] Dickinson 2005, 127–36.

[178] e.g. Castel Trosino in the March of Ancona, Grave 9 — Bierbrauer 2008, fig. 30.

[179] e.g. Boffalora d'Adda in Lombardy — Hegewisch 2008, 367 cat. no. 177.

[180] Salin 1904.

[181] Dickinson 2005, 146–63.

[182] Izikowitz 1931.

[183] Dickinson and Härke 1992, 5–24 fig. 16; Underwood 1999, 77–91.

[184] Dickinson and Härke 1992, 43–44.

[185] See Schmidt 2015.

[186] Dickinson and Härke 1992, 43–47 fig. 34.

[187] Dickinson and Härke 1992, 25–27 fig. 17.

[188] There is a need for a critical study of the aforementioned types. One cannot acknowledge here the latest attempt by Olędzki and Tyszler 2019, as it refers to shield bosses of Type Horgos only and it lacks clear criteria of the type. Additionally, I do not recognize grounds to narrow down the chronology of Type Horgos umbones from Poland to Phase D1, as proposed by the authors

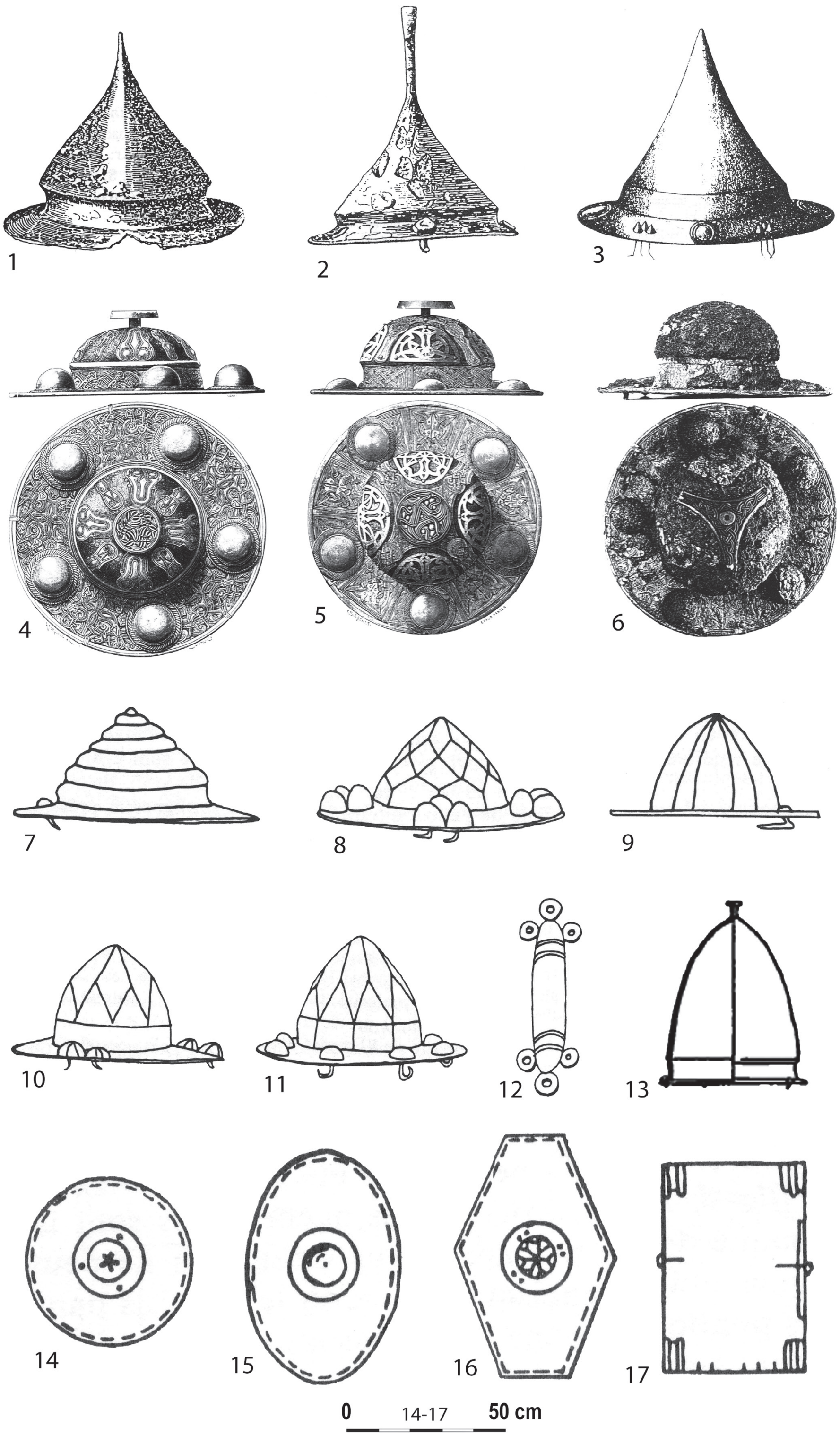

Figure 5.14. Shields from the Migration Period and their fittings. 1 — Horgos; 2 — Liebenau; 3 — Vermand III; 4 — Vendel, Grave XII; 5 — Vendel, Grave XI; 6 — Valsgärde, Grave 6; 7 — Šapka Abgidzrahu, Grave 27; 8, 11 — Kerch, Grave 145 discovered in 1904; 9 — Šapka Ah'jacarahu, Grave 20; 10 — Šapka Abgidzrahu, Grave 12; 12 — Kerch, graves discovered on 24 June 1904; 13 — England; 14 — Šapka Abgidzrahu; 15 — Monetnyj Holm 3, Grave 1; 16 — Šapka Abgidzrahu, Grave 12; 17 — Šapka Abgidzrahu, Grave 44 (1–3 — after Kaczanowski 1994b, figs 7:1, 8:e with further reading; 4–6 — after Nørgård Jørgensen 1999, fig. 59 with further reading; 7–12, 14–17 — after Kazanski 1994, figs 4:1, 6, 8–10, 5:30, 7:1–4; 13 — after Dickinson and Härke 1992, fig. 16:l).

other hand, shield bosses with short spikes ending with small round discs were still in use in the second half of the fifth century. Such bosses survived to the end of the sixth century (Fig. 5.14:4–5). In the early seventh century there was a return to conical bosses, which were later provided with short spikes. By the end of that century, high dome-shaped bosses had become widespread.[189] They were shaped like sugar loaves, and also ended with short spikes provided with small discs. Such bosses were in use until the end of the seventh century.[190] In Scandinavia, changes in shield boss shapes proceeded in a similar way. However, no bosses with sharp spikes were recorded, and apart from sugar loaf-shaped finds (Type SBD according to Anne Nørgård Jørgensen), in the seventh century there were also artefacts with hemispherical upper parts on cylindrical collars but with no apexes and small discs atop (Type SBB according to Nørgård Jørgensen) (Fig. 5.13:6). Such bosses became prototypes of Viking Age umbones.[191] A very similar development can be seen in the case of Longobard shield bosses, although it is possible to point out some differences concerning their forms and periods of occurrence.[192]

In the Pontic zone, entirely different shield types were in use. In this region, there are iconographic depictions from the territory of the Bosporan Kingdom and discoveries from inhumation graves.[193] In two tombs from the Early Migration Period, discovered in Kerch on 24 June 1904, treasure hunters found (amongst other items) the aforementioned oblong hexagonal shield, covered with leather and ornamented with figural scenes (Fig. 5.8:2). Remains of a similar hexagonal shield (its shape is evidenced by two silvered bronze edge fittings which are 72.5 and 74 cm long) were discovered in Tomb 145 in 1904.[194] In this zone, apart from interregional forms, conical shield bosses of Type Kerch were frequently in use. Their covers were faceted with a pattern of polygonal fields with adjacent sides and were sometimes gilded (Fig. 5.14:8, 10–11, cf. similar forms from this zone — Fig. 5.14:7, 9). Such shield bosses were used in the first half of the fifth century. The same chronology applies to Gospitalnaâ type shield grips, which had rivet plates composed of three circular plaques (Fig. 5.14:12).[195] Other reconstructions were possible thanks to examinations of biritual necropoleis of the Cebelda Culture (Abkhazia). Apart from round shields — Cibilium 1, Grave 24–70 cm[196] in diameter, and Grave 4–60–70 cm in diameter, Šapka Abgidzrahu (Fig. 5.14:14),[197] — it is possible to point out traces of oval shields measuring 75–50 cm (Monetnyj Holm 3, Grave 1 — Fig. 5.13:15; Lar, Grave 12). Furthermore, there was also a hexagonal shield with dimensions of 80 × 50 cm (Šapka Abgidzrahu, Grave 12 — Fig. 5.14:16) from Phase D.[198] An adaptation of a typical Germanic shield shape may have taken place under the influence of both the Germanics (Goths) who were reaching this part of the world, as well as the Barbarized Roman troops. This seems to demonstrate a longevity of such shield forms in the Barbarian (Germanic) milieu. Other rectangular shields with metal fittings of corners, but with no shield bosses, were found in Šapka Abgidzrahu, Grave 12 (Fig. 5.14:17) and in Graves 39 (dimensions 50 × 66 cm) and 43 (dimensions 38 × 58 cm) from Cibilium 1. These are dated to the second half of the fifth and the first half of the sixth centuries.[199] This demonstrates that in the Late Migration Period the Pontic world separated itself from the military reality of Europe.

In this chapter I tried to discuss the changes in form and function of Germanic shields, in an attempt to verify a number of well-established opinions in this field. I also proposed new ideas concerning several aspects of their origin. Naturally, it would be possible to continue this discussion. Among other things, prototypes of Viking shields were mentioned, which brings us to the Medieval Period. However, there is a danger that if I continue, it will be necessary to eventually discuss shields used by present-day riot police units: numerous analogies could be found here, such as using close formation to push the opponent away. In order to avoid such a necessity, and for the sake of fidelity to the chapter's title, I end this story here.

(which allowed them to attribute this type solely to the Vandals). What is more, it neglects some finds from the Balkans and Pontic zone, i.e. the Cebelda Culture (Šapka-Cerkovnyj Holm-4, Grave 4) — Kazanski 1994, 445–46 fig. 3:14; Kazanskij 2015, 42 fig. 6:13, with further reading; theoretically, one may also consider — probably later — early Byzantine umbones with pointed apexes from Ayas, Mersin Province in Turkey as Jerusalem Mamilia hoard (Quast 2012, 357 fig. 5:1).

[189] Dickinson and Härke 1992, fig. 17.

[190] Evison 1963.

[191] Nørgård Jørgensen 1999, 77–87 figs 106, 112, 115.

[192] Cf. Bierbrauer 2008, fig. 18.

[193] Kazanski 1994, 443, 452–53 fig. 7.

[194] Zaseckaâ 1993, 42–50 pls 12–20.

[195] Kazanski 1994, 448, 452 figs 4:8–10, 5:28–30.

[196] Voronov and Šenkao 1982, 139–40 fig. 10.

[197] Voronov and Jušin 1979, 184–85 fig. 3.

[198] Voronov and Šenkao 1982, 132 fig. 5:1–3.

[199] Voronov and Šenkao 1982, 132, 148–54 figs 5:4; 17–19.

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